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PART FIRST.

ORIGINAL COMMUNICATIONS.

The Liver, and its Functions. By M. CRONINGER, Newville, Ohio.

The liver, the largest of the abdominal viscera, is situated in the right hypocondrium, extending across the epigastric, into the left hypochondriac region—being hid from view by the cartilages of the ribs and the ensiform cartilage of the sternum. It is retained in its position by folds reflected from its peritoneal envelop, to which anatomists have given the name of ligaments. A distinct system of blood vessels is appropriated to it; and from which mainly the secretion of bile takes place.

The arteries, which afford blood for its nutrition, arise from the coeliac axis of the aorta just as it emerges from behind the stomach.

The hepatic artery—intermediate in size between the splenic and gastric—the other members of the coeliac family—after giving a small branch to ramify over the upper curvature of the stomach, (*the arteria pylorica*)—and another to be distributed to the duodenum—(*the arteria gastro-duodenalis*)—inclines upwards and to the right side between the layers of the small omentum, and just before reaching the liver divides into two branches; one, the greater, going to the right lobe, and the other to the left, where they divide, and sub-divide throughout the entire organ.

The liver is supplied with nerves partly from the coeliac plexus, and partly from the pneumogastric and diaphragmatic nerves; these, uniting, follow the hepatic arteries into the substance of the organ, to their ultimate ramifications—surrounding and enveloping them in a web of nerve tissue—thus supplying the organ in every part with nerves. Chains of lymphatic vessels spread out all over the surface of the liver and dip into its substance, following the course of the blood vessels and nerves. It is also worthy of note, that these absorbents carry the products of their labors at once to the thoracic duct, although at different points along that important receptacle.

We have already remarked that the liver was furnished with a distinct system of blood vessels. This is one of the most remarkable circumstances connected with the animal economy—one, too, the natures and adaptation of which, at first, might not strike us as being very obvious. The portal system, by its distal venous radicals, gathers up all the blood which, after having circulated throughout the abdominal viscera to give life and pabulum to these important organs and tissues, comes back burdened with the debris afforded by these ever changing organs; together with much of the nutritious matter from the alimentary canal. This, then conveyed to the liver where, by another no less interesting capillary arrangement, it is distributed to every part of the organ, thus furnishing it with a circulation over which the ever varying state of the general system can have but little control—being, in some respects, isolated from a grand system, to the maintenance of which, it contributes so freely of its toil and care.

The function of the liver has been a theme of interest to the student of natural phenomena, long before anatomy was studied as a distinct science. The secretion of a peculiar fluid was regarded as being due to it, and the development of certain peculiar manifestations in diseased states of the system, was watched with interest as being the result of changes going on within the then mysterious organ. Nor is it to be wondered at, when we remember the difficulties which attended physiological inquiries before the arts had given to philosophical investigation its most modern and useful helps—Microscopy and Chemistry. Indeed, it was not uncommon to have erroneous offices attributed to any of the more important organs of the body.

Hence, while chasing the phantom of the human soul through the multifarious fastnesses of the body, it was not strange, that having

arrested the intellectual part of it in the convolutions of the brain, the part of the organ which has the power "to give to airy nothing a local habitation and a name," that they made the liver the palace royal of the soul. Hence, in ancient literature, the frequency of such terms as "Melancholy"—"Hypochondriasis"—"Bilious Temperament." Of one fact, however, the ancient fathers seem to have had very just conceptions: That whatever other purpose this organ might subserve in the animal economy, it did *secrete*, or eliminate from the fluids furnished it, a concrete matter which they denominated "cholos," or "bilos," the composition of which they did not attempt to understand. But when the lights of modern science began to dawn, the mists in which this subject had long been enveloped, rapidly disappeared before its genial warmth and glowing rays; and then stubborn facts usurped the place of hypothesis and assumption. The microscope traced out each delicate tissue, and demonstrated the beautiful ultimate texture of the liver cells, blood vessels and bile ducts, as they ramified over the lobules; and showed that, from the central parts of the lobules the fine capillary system of hepatic veins emerge. Chemistry, at first extremely chimerical, because occupied in the pursuit of the "Philosopher's Stone," or the "Elixir of immortal Youth," when brought to bear upon this subject, dissipated much of the uncertainty and ignorance which enshrouded it. The bile was analyzed and its constituents approximately ascertained; the changes which take place in the blood, or other fluids contributing to its formation, was noted, and the effects produced upon the blood by the secretion or elimination of the bile, was also pointed out.

Secretion, as defined by Mr. Webster, means "a separation of animal juices;" but, as used by physicians, means not merely a separation from the blood of the peculiar elements necessary to the formation of complex compounds, but also the gathering together of elementary matter and the compounding of this by cell action. This process may concern matter designed to be retained in the system; or it may be exerted upon the debris, the effete worn-out particles of organs no longer capable of being appropriated to the biological necessities of the organism, and in this latter case is called an excretion.

But not wishing to enter into a discussion of this subject, we will return and inquire from which of the delicate textures of the liver does this secretion of bile take place?

Here, too, the revelations of the microscope and the labratory of

the chemist, have failed to satisfy the thirst of the anxious inquirer after truth. Some laborious investigators are led to the conclusion that the bile is the product of the secretory action of the epithelial membrane of the gall ducts, while too, the liver cells have the important duty of "forming" liver sugar and fat. While on the other hand, men of no less extensive and patient inquiry, hold that the bile is the undoubted product of the action of the liver cells, and that the epithelium of the liver ducts secrete a fluid, as in other epithelial tisues, which is appropriated to its own defense. From the very patient and extensive inquiries instituted and carried on by modern physiologists upon this subject, although nothing definite has yet been accomplished, we are led to believe that other important functions are performed by this organ, viz: the rejuvinescence or formation of blood corpuscles, or the production of other principles necessary to carry on the great vital processes of the system.

The bile secreted by the human liver, is of a bright yellow green color; or, when immediately secreted, it is said by some to be almost transparent; but it rapidly changes to a darker hue on being long retained in the gall cyst, or on being exposed to the atmosphere. It is of a ropy, tenacious consistance, containing a large proportion of water, and rapidly passes into decomposition. Its analysis by Berzelius, gave the following results:

Water	90.44
Biliary matter	8.00
Mucus of gall bladder	.30
Soda	.41
Chloride of sodium	.74
Phosphates and sulphates of soda and lime	.11
	100.00

The biliary matter which is thus seen to form so inconsiderable a part of the above result, has itself been submitted to a great number of analytical experiments; but, I am sorry to say, with very contradictory results; hence, we are led to believe that until some new developments occur which will enable the practical chemist to make a more thorough analysis of this complex substance, we must dispair of succeeding to correct views on the pathology of the liver.

There seems, however, to be contained in it, in varying proportions, glyko-cholic and tauro-cholic acids, generally in combinations with an alkalie, forming salts. And what would strike us as very

remarkable, is, that in the bile of fishes inhabiting fresh water, as our northern lakes and inland seas, we have soda salts, while those of marine or salt water origin, furnish potash salts.

Cholesterine is found also in bile as an invariable constituent, forming the basis of its fatty acids and biliary calculi; there is also the pigments, two or three kinds of which are described as being sometimes found in the bile, under certain circumstances.

The quantity of Bile secreted in twenty-four hours.—Although most of the physiologists of the present day, depend for their estimate of the daily elimination of bile upon the experiments of Bidder and Schmidt, made at the Derpt laboratory, yet it seems very strange that such a great difference should exist between different authors. Thus, Bidder and Schmidt themselves, estimate the daily product of an ordinary sized man, at 54 ounces, which Dr. Draper thinks decidedly too high—from what reason, we are not informed. Dr. Chambers of England, from the same experiments, estimates the quantity at from three to four pounds; while Carpenter, without giving any thing new upon which to pin an argument, but as it would seem, from the same stand point, reduces the quantity to from seven to ten ounces. These experiments having been made on the lower animals, leave room for doubt, and should hence be looked upon as merely approximations.

The production of bile at different hours after taking food, has been observed to vary remarkably. Thus the increase is gradual up to the twelfth or fourteenth hour; it then gradually decreases for the next twelve hours, to its usual discharge. It thus appears to be in direct ratio to the demands of the system, as we shall soon see.

In its healthy and pure state, it is found to be most usually alkaline, but its chemical states, while in the system, do not seem to be much disturbed by the presence of acids in the intestinal tract. The secretion is very much under the influence of diet, medicine, disease, mental emotions, and other circumstances.

Thus a full meal increases it in quantity, as well as in its solid constituents. A diet of animal food passes rapidly into decomposition, and consequently demands the presence of an antiseptic, and thus encourages a very large flow of bile. In the use of fatty diet, less bile is secreted, which we would not have inferred from *apriori* reasoning; but it will not seem strange when we remember that fats do not undergo putrescent decomposition so rapidly as other animal tisues. Also vegetable diet causes less formation of bile.

Medicines have directly opposite effects on the secretion of bile, as was long since inferred. And history can scarcely point to the period of time that did not produce its "anti-bilious pills," and "liver purifiers." But late experiments give us room to hope that the shelves of the druggist may yet be unburthened of their useless loads, and the Doctor's pill-bags and his patients' stomachs may yet be treated to more savory condiments than extracts of taraxacum and blue pills. Large draughts of water will increase the flow of bile, but its solid matters are not increased in proportion to its fluids. While calomel increases the fluids, it absolutely decreases the solid matter. The experiments of Dr. Handfield Jones, however, led him to believe that mercurials caused an increased deposit of yellow coloring matter in the hepatic cells. But it should be remembered that this gentleman did not look upon the liver cells as the source of the bile, and hence his experiments would be opposed to his theory. Carbonate of soda decreases the secretion of bile, and, as I think, by its taking the place of the bile in acting as an antiseptic, in producing an alkalinity of the chyle. Acute diseases, as fevers and inflammations, interrupt the secretion of bile.

The mode in which medicines act in promoting the secretion of bile, is really not very well understood; and the more recent experiments on the liver have not removed from this difficult subject, much of its embarrassments. For while they throw doubt on our former views, they propose nothing in the place of them more certain. It was generally believed that mercurials acted DIRECTLY upon the liver—stimulating this organ into increased functional activity; and I believe this is still the prevalent opinion. In fact, so powerful has been the force of popular, as well as professional opinion on this subject, that to think otherwise was once regarded as heresy.

Fortunately the new lights we are receiving upon this and many other kindred subjects, if they do not lucidly expose former errors and clear up the future, they leave the mind less trameled and more free to look after nature's hidden mysteries; and we have reason to hope that some thing yet, in the undeveloped future, is awaiting the lucky adventurer. Taking the mercurials as a type of those medicinal substances supposed to act directly upon the liver, we will inquire for a moment into the literature of the subject; and as we do not propose going into a full discussion, we will commence with a consideration of the present position of the profession.

Dr. Wood, on this subject quotes the experiments of Dr. Samuel Wright, illustrating the effects of mercurials on the blood. These

go to show a deterioration and diminution of the solid constituents, including the albumen, fibrin and red corpuscles of the blood, "that it abounds in fetid, fatty matter; and that it is more than ordinarily prone to decomposition." The Doctor refers this degeneration of the blood to the disturbed vital properties of the red corpuscles and fibrin, thus lowering "their grade of vital energy," and thus "disposing them to fatty degenerations." He also thinks that the yellow color of the alvine evacuations is an evidence of increased secretion of bile, and also of the breaking down of the red corpuscles of the blood. He accounts for the slight peristaltic actions of the bowels, and mild griping pains and uneasiness of the bowels after the mildest mercurial course, by the presence of bile in the intestinal canal.

Now it seems to me that this is putting the effect for the cause. Thus, we know that the effect of mercurials is to excite the salivary glands to an increased action if given in small doses. And, from analogy, it seems reasonable to believe that the small glands, in the intestinal canal, are in all respects both in construction and function, salivary glands, and affected by the action of medicines just as those situated further up the canal; this being admitted, what would follow? Why, that mercurials have no direct action on the liver at all. But then how will we account for the increased secretion of bile following the administration of mercurials? In this way we have already seen that water increases the secretion of bile. Now I think it but just to infer that the mercurial increases the salivary secretion of the intestinal canal, thus affording a larger amount of fluids to be taken up by the venous radicals of the portal system; just as when water is taken directly into the stomach; and acts on the secretion of the liver. This view of the *modus operandi* of sialagogues is much more consonant with reason, than to suppose that half a grain of calomel, after being mixed with two or more gallons of chyle, and other matters in the intestinal canal — (supposed to be from forty-five to fifty feet in length) should be gathered together and thrown upon the liver, thus producing a stimulating effect. But how will we account for the effects so gravely spoken of as being produced upon the blood constituents by mercurial medicines? Here it seems necessary, in order to answer this inquiry, to go a step further and inquire into the uses of the bile in the animal economy. We look upon the bile as first, acting as an antiseptic to the chyle. It has already been stated that the chyle rapidly

undergoes decomposition when no bile is present; and we would also infer from the beautiful provision of nature by which the secretion of bile increases as digestion advances, and then, as gradually decreases, that it was present for some such purpose. It must, also, in this connection, be remembered, that the bile renders the fats of ingesta capable of being absorbed by the venous radicals. And it is of no less importance to remember that through this great emunctory, much of the debris and other worn out substances such as broken down and disintegrated blood and lymph corpuscles, are got out of the system.

With such facts before us, suppose that a course of mercury is decided upon, the following phenomena will be observed: the medicine will increase the secretion of saliva in all the salivary glands, and an increased quantity of water will be taken into the portal vessels, the result of which will be, an increase of fluid bile with a diminished proportion of solid constituents—in fact an unhealthy bile, unfit to preserve the chyle from decomposition—this, if taken up by the lacteals, together with the nutrient matters in the intestinal canal in a state of incipient decomposition, must give rise to a putrescent condition of the blood.

But the yellow colored, or the dark tarry discharges, have not yet been accounted for.

In regard to this question we have no hesitancy in saying that these variously colored fæcal discharges are due to the disintegrated blood corpuscles and other debris from the tissues in general—and that they are thrown out by the liver, as before intimated.

In view of the fact that crude theories upon this subject have been sanctioned by old and time honored names, I offer these suggestions with that humility becoming a true student of nature, and a lover of truth.

Rupture of the Femoral Artery; occurring in a patient at the Ohio Penitentiary. Reported by B. F. CULVER, student of medicine in Starling College.

E. Moffit, aged 53, of nervo-bilious temperament and slender frame, while sawing lumber with a buzz saw, October 21st, 1858, was struck in the left groin with a piece of inch plank about four feet long, and was at once conscious of some unusual injury.

The prison physician being summoned, discovered that a large blood vessel had been ruptured, and estimated that about one

and a half gallons of blood had been effused into the surrounding tissue, increasing the thigh to nearly double its former size. Moreover a large conical elevation appeared over the seat of injury, being distended with blood, and having on its summit a slightly abraded spot about an inch in diameter.

The case being unusual, the physician was thrown entirely on his own judgment respecting its nature and treatment.

He immediately ordered the patient to be put to bed, and cloths wet with cold water, to be applied to the part to prevent the development of inflammation, enjoining at the same time perfect quiet.

During the day the entire left side of the patient, from the fourth rib to near the knee, assumed a dark purple color. Still he was quite comfortable and free from pain, when quiet. This was the treatment until the fifth day, his bowels being kept loose by a laxative.

On the fifth day he disobeyed the injuction of the physician, and rose to perform the act of defecation. A fresh bleeding was the result, and though slight in amount was sufficient to alarm him and prevent any future disobedience. The bleeding, however, subsided in a short time.

During this time the abraded point showed a strong tendency to suppurate, and all possible care was taken to prevent an occurrence which it was supposed would have made an outlet for the escape of the blood and thus prove fatal.

During all the time the patient was free from pain, and a gradual absorption of the effused blood seemed to be going on, and from a seemingly hopeless case it become more promising. The disturbance of sensation which occurred at first, gradually subsided to something like its normal condition.

A most marked feature in the case was the entire absence of pulsation in any part of the affected limb; another was the enlarged and turgid condition of the veins of the leg, and a constant sweat, like exudation from the skin, though the temperature of the part was considerably lower than the rest of the body.

The diet was carefully guarded, both in respect to quantity and quality; care being taken not to give him any excess till the danger of inflammation was past—bowels were kept loose.

Under this treatment the patient gradually improved, and was discharged on the 29th of January, 1859, after an illness of 99 days.

On the one hundred and fifth day after the accident, he came

before the medical class of Starling College, being then able to walk by the help of a cane. At this time all traces of effusion had disappeared, and instead, a hard irregular tumor occupied the former seat of injury, seeming to occlude perfectly the vessels of the part. *There was not even then the slightest perceptible pulsation in any part of the limb.*

Shortly after this the patient left the city, and has not since been heard from.

PART SECOND.

AMERICAN AND FOREIGN INTELLIGENCE.

REGENERATION OF THE SPINAL CORD.—(*Lancet.*)—SIR: Numerous as are the recorded cases of nerves rapidly healing after division, and regenerating after a small excision of their substance, I am not acquainted with any case of regeneration of the spinal cord after complete division. The following may therefore be of interest:

In the course of numerous experiments on the batrachia, some of which consisted in dividing the spinal cord in various regions, to establish different independent centres of nerve-action, I found that a frog with the cord divided in the dorsal region, after exhibiting for some weeks the most complete independence in its anterior and posterior extremeties, began at last to exhibit a certain *consensus.* Originally, when the posterior extremities were pinched or touched with acid, they were agitated, but the anterior remained motionless; and *vice versa.* Sometimes the anterior segment crawled, dragging the posterior segment after it like a log; at other times the posterior segment moved, and the anterior was quiet. No irritation of the one segment had any perceptible effect on the other segment; the two were as completely separated as if they had been two different animals.

About ten days ago, I was showing a friend this interesting example of two independent centres of nerve-action in one animal, when, to my surprise, instead of the anterior extremities remaining perfectly quiescent, when the posterior was pinched, a decided agitation was visible in them, though of a slight character. This was so contrary to all that I had observed in the case of other animals, that at first I set it down to the wrong cause; but on reflection, it occurred to me that there had perhaps been a partial regeneration of the spinal cord. The next day I tested this, and found unequivocal symptoms of sensibility. Whenever the posterior extremeties were pinched, the anterior were also agitated. It was evident that the two centres had become one, as respects sensibility; but the

slight traces of a consensus of voluntary motions were too equivocal to admit of a decisive affirmation,

To day, I find all doubt disappear. The consensus of voluntary motions is so far re-established that the frog (which, by the way, has only one hind foot) in crawling, uses the posterior extremities in aid of the anterior, awkwardly and inefficiently, it is true, yet in a manner unmistakably different from his former mode. It will even make one hop, when much irritated! This shows that to some considerable extent, there has been a re-union of the sensory and motor centres, formerly separated. There are no longer two utterly independent centres; whatever affects the one segment affects the other. A consensus has been re-established; and this would probably have been more perfect had the animal been left in perfect repose from the period of the orginal section of its cord; but having since then been subjected to a variety of experiments, a perfect healing of the two ends has perhaps been prevented.

I am, Sir, yours truly,

G. H. Lewes.

Nervous System, Report on.—Kussmaul and Tenner produced by compression and ligature of the arteries of the neck in healthy rabbits, the same epileptic convulsions which are seen in animals bleeding rapidly to death. In very debilitated or etherized animals neither loss of blood nor compression of the arteries caused the convulsions. The closure of both carotid and subclavian arteries was necessary in order to effect the convulsions; if circulation was allowed to continue in any one of the four vessels, convulsions never ensued, but only weakness and paralysis. The general convulsions usually commenced about eight to eighteen seconds after the interruption of the arterial circulation. For the description of the convulsions we must refer to the essay itself. Epileptiform they are, according to the authors, because the animals before the commencement of the general convulsions fall down, deprived of voluntary motion, with the appearance of loss of consciousness, never screaming before or during the attack; further, because the pupils are, during the attacks, dilated and motionless, and the eyeballs likewise fixed; that the attacks begin with contraction of the cervical muscles, that the respiration is suspended, although the heart's action is uninterrupted; and that the atonic convulsions of the limbs end in tonic convulsions, are additional causes for the authors views regarding the nature of the attacks. As soon as the interruption of the circulation ceases, the convulsions leave off. The sudden return of the blood to the head never causes convulsions. By means of holes made in the cranium, the authors observed that the stoppage of the circulation was followed by capillary anæmia and venous oligæmia of the brain and its membranes; that the venous oligæmia became diminished simultaneously with the commence-

ment of the convulsions, but that the paleness of the brain continued. As the essential cause of the convulsions, the disturbed nutrition of the brain is considered. The diminished mechanical pressure is regarded as of only secondary importance. The attacks took place even when a great part of the cerebrum, cerebellum, and medulla oblongata was laid open. Anæmia of the spinal marrow caused only paralysis of the limbs, the muscles of the trunk and respiration never real convulsions; when the privation of blood was sudden and complete, slight trembling motions of the limbs preceded the paralysis. A series of experiments, made by taking off parts of the cerebrum, proved that the epileptiform convulsions did not depend on the cerebrum, but on the suddenly interrupted nutrition of the motor centres situated between the optic thalami. From these results, and the authors' experience on man, they infer that epileptic convulsions in man occur only when, besides the cerebrum, some of the parts, or all parts of the brain situated behind the optic thalami, become suddenly deprived of the sufficient amount of blood; that, however, the fall preceding the convulsions, the loss of consciousness and sensibility, depend on the affection of the cerebrum. Congestion of the brain, either active or passive, appears to them a very improbable cause of epileptiform convulsions. The sphagiasmus and trachelismus of M. Hall, the authors say, is not to be considered as a source of epileptic paroxysms, but the laryngismus is such a source. It seems further probable, from some experiments, that some forms of epilepsy are connected with a spasm of the contractile elements of the cerebral arteries. The medulla oblongata, therefore, as the origin of the contraction of the glottis and of the vaso-motor nerves, may be regarded as a frequent cause of epileptic peroxysms.

Stich observed that in cases of paralysis of the facial nerve, the corresponding margin of the tongue exhibits a diminution of taste, which phenomenon does, however, not extend to the root of the tongue. The diminution of taste does not take place if the cause of paralysis lies on the base of the cranium; but if the cause lies at the origin of the chorda tympani, or has a more peripheric situation, the disturbance of taste occurs. Schiff remarked this phenomenon in a man whose facial nerve had been cut through close to its emergence from the stylo-mastoid foramen. It appears, therefore, that this disturbance is attributable not to the facial nerves, but to the fibres derived from the fifth pair.

Spiegelberg concludes, from numerous experiments on rabbits, cats, and guinea-pigs, regarding the movements of the uterus. 1. That the stoppage of the circulation is the cause of the peristaltic movements of the uterus. The uterus resembles in this respect the intestinal tract. Compression of the aorta immediately below the diaphragm, causes always movements of the tubes of the uterus and intestinal tract, which continue as long as the compression lasts, and ceases as soon as the interruption of the circulation is suspended. 2. The pneumogastric nerves exercise no immediate influence on the uterus; but if they stop the action of the heart, this

circumstance acts like the compression of the aorta. 3. Irritation of the medulla oblongata excites contractions of the uterus, which phenomenon is not influenced by section of the pneumogastric nerves. 4. The cerebellum is the principal centre for the movements in question. Irritation of any part of it excited the action of the uterus, that of the posterior half of the corpora quadrigemina was likewise often successful, that of the cerebrum never. 5. The movements may be excited from every portion of the spinal marrow, but especially from the lumbar and sacral portion. The movement of the pregnant uterus may be stopped by means of irritation of the spinal marrow; this, however, the author attributes to over-excitation. 6. The sympathetic and sacral nerves form the means of communication between the nervous centres and the uterus. 7. The impulse to the parturient action of the uterus is not given by the nervous system, but probably by local changes of the circulation in the uterus, occurring at the termination of pregnancy.

The same author confirms the dependence of the intestinal movements on the spinal marrow and brain. From all places which excite the movement of the uterus, that of the intestines may be likewise excited. Interruption of the circulation effects likewise very active movement of the intestinal canal; compression of the aorta does it to a much greater degree than compression of the vena cava or vena portæ. This would be opposed to Brown-Séquard's view, that the carbonic acid in the blood is the cause of the peristaltic movements. It would also appear incorrect to ascribe the peristaltic motion of the intestines exposed to the air immediately after the death of the animal merely to the excitation by the air.

Pflüger's assertion, that irritation of the splanchnic nerves stops the peristaltic movement of the intestinal canal, has been repeatedly contradicted. Kupffer and Ludwig found that irritation of the nerves in question may excite the action of the intestine, or stop it, according to the condition of the latter. We may add to this, that there are now various observations extant that the same nerve may cause movement and may arrest movement. Schiff's view, that the arresting of movement is not a peculiar action of the nerve, but the product of over-irritation—i. e., exhaustion, appears to deserve the attention of experimenters. We need only mention that Erkhard observed acceleration of the heart's contractions by *moderate* irritation of the pneumogastric nerve.

Budge found, in his experiments on various animals, contrary to the view expressed by Romberg,* that the ganglion semilunare and the ganglion mesaraicumare in a considerable degree sensitive; at all events as sensitive as the pneumogastric nerve, the splanchnic nerve, the ramus communicans, and the cervical ganglion of the great sympathetic; but much less so than the fifth pair or the posterior roots of the spinal nerves.

Czermak confirms Ludwig's observations, that irritation of the sympathetic branch of the submaxiliary gland, or of the cervical

*Lehrbuch der Nervenkrankheiten, third edition, vol. 1, p. 151.

portion of the sympathetic nerve, may excite the secretion of saliva just as much as irritation of the glandular branch of the lingualis. The author remarks, however, in addition, that electrical irritation of the cervical part of the sympathetic nerve, may diminish, and even suspend the secretion of saliva. Sometimes the irritation of the glandular branch of the linguails does not influence the secretion of saliva, when the sympathetic nerve had been previously irritated. If both nerves are stimulated simultaneously, the secretion rapidly reaches its maximum, but after fifteen or twenty minutes, it becomes diminished, and frequently ceases altogether. We have therefore another proof of the arresting action of the nervous system, if we do not prefer to explain the phenomenon just described as the product of over-irritation.

The experiments of Harless, made on the nerves of frogs, prove that the sheaths of the nerves are of great importance in regulating the irritability of the nerves. The author considers himself entitled to infer that the irritability and the conducting power of the nerve are in close connexion with the proportion of water contained in the nerve—viz: that they become much increased by any loss of water sustained by the nerve. He further maintains, that the degree of irritability and conducting power varies with the degree of pressure exercised by the sheath; that this pressure becomes increased by the process of exudation of the sheath; that, therefore, the irritability and conducting power of the nerve depend, to a great degree, on the percentage of water contained in the sheath.—*Brit. and For. Med.-Chirur. Review.*

A New Function of the Placenta. By CLAUDE BERNARD.

[Translated from the French by WM. F. HOLCOMB.]

The object of my communication is to establish anatomically and physiologically that, among its uses, which are without doubt diverse and multiplied, the placenta is designed during the first stages of fœtal development to perform the "glucogenic" function of the liver before it has acquired the development and the structure in the fœtus which permit it later to perform its functions. I have for a long time been diverted from the point to which all my researches tended, because I made my experiments upon the placentas of ruminants, which are most easily procured in the slaughter-houses of Paris. For several years I have made multiplied, but fruitless, observations upon calves and sheep taken at all stages of intra-uterine life, and it was impossible for me ever to find any part of the placenta of these animals which contained glucogenic matter. In spite of these complete failures, I had recourse afterwards to the placentas of rabbits, Guinea pigs, &c. I found that there was in the placentas of these animals a whitish substance formed of epithelial or glandular cells agglomerated. I proved that these cells, like those in the liver of

the adult animal, were filled with glucogen. This mass of glucogenic cells seemed to me to be situated principally between the maternal and the fœtal portions of the placenta, and after being developed they appeared to become atrophied in proportion as the fœtus approached. The time of birth I recognized in this manner: that the placenta of the rabbit and Guinea pig is formed of two parts, having distinct functions: the one portion vascular, and permanent until birth; the other glandular, preparing the glucogenic matter, and having a duration less extended. Notwitstanding there remained the negative observations made in such great numbers upon ruminants, which were for me as unquestionable as those in which I had obtained positive results. In resuming these investigations, I have arrived at the proof of a remarkable disposition which could not certainly have been forseen: that is, that in the ruminants, whilst the vascular portion of the placenta, represented by numerous cotyledons, accompanies the allantois, and spreads itself upon its external surface, the glandular portion separates from it, and is developed upon the intestinal surface of the amnios. From which it results, that if in the rodentiæ and other animals with a simple placenta, the vascular and glandular portions of the placenta are mingled together; in the ruminants, on the contrary, these parts of that organ are developed separately, and on distinct membranes, and can, in consequence, be observed separately in their respective evolutions. Thanks to this anatomical disposition, we can prove clearly that the vascular portion of the placenta is persistent and increases until the moment of birth, whilst we see the glucogenic portion attached to the amnios growing during the first period of gestation, and attaining at the third* or fourth month its maximum of development, then disappearing little by little, in passing under the various forms of atrophy and degeneration, in such a manner, that at the birth of the mammiferæ there will not exist a trace of the hepatic portion of the placenta. It must be added, in characterizing distinctly these organs, that during all the time of the growth and action of the hepatic placenta of the amnios, the *liver* of the *fœtus* possesses neither structure nor function, and that it is precisely at the moment when the liver is developed, and that the cells having acquired their definite form, commence to secrete the glucogenic matter, that the hepatic organ of the amnios begins to disappear. The hepatic "plaques" of the amnios in the *ruminants* appear in the first stages of embryonic life. They are developed gradually on the internal surface of the amnios, covering at first the umbilical cord, just to the point where a distinct line separates the skin from the amnios. Then these coverings, which, upon the portion of the membrane which clothes the cord, assume more particularly the form of villosities, extend themselves upon the other portions of the amnios in proportion as the sanguineous vessels which accompany them are developed. They increase little by little in volume, formed at first of a transparent matter; they become later more opaque, especially towards their edges, which

* I can give here only an approximate limit, by reason of the impossibility to know the exact age of the calv s procured at the slaughter-houses.

turn up a little, and cause them to resemble in appearance a cover of lichen. They are, besides, in form sometimes flat, sometimes filiform, extremely varied, and sometimes so confounded with each other as to become confluent. When completely developed, these "plaques" sometimes attain a thickness of three or four millimetres; those which are filiform occasionally present a much greater length, and are now and then enlarged in the form of a club at their extremities. Later, these hepatic "plaques" cease to develop. In certain parts they become yellowish, and assume a fatty appearnce; in other places they fall, and float in the liquor amnios. They leave at first a kind of cicatrix, which afterwards entirely disappears. It can be proved with the greatest facility, that the glucogenic matter is always present in the hepatic "plaques" of the amnios in every stage of their development. As soon as they appear it is easy to recognize this matter with the microscope, by the aid of iodine. When these "plaques" are perfectly developed this matter can be obtained in large quantities, and its character studied. To obtain it easily, the process consists in dipping the amnios membrane in boiling water, so as to permit the layers to be easily detached, then grind them in a mortar, and extract the matter by boiling exactly the same as for the glucogenic matter of the liver. As to its character, the glucogenic matter of the amniotic "plaques" offer the most perfect identity with that of the liver. It dissolves in water, precipitates by alcohol, and crystallizes by acetic acid. Iodine gives it an intense wine-red color, which disappears by heat, and reappears on cooling. This coloring, by iodine, of the glucogenic matter of the amniotic "plaques," takes place not only when it has been extracted from the cells by boiling, but also upon the cells themselves, as we shall soon see.

Like the glucogenic matter of the liver, the matter from the amniotic "plaques" changes into dextrine and glucose with the greatest facility, under the influence of ferments, both animal and vegetable, and by boiling with strong acids. When the anatomical structure and development of the hepatic "plaques" of the fœtus are studied, the formation of the glucogenic cells can be distinctly followed, as well as the development of the matter in their interior. The amnios membrane in the calf seems to be at first deprived of well-characterized epithelium, and the tissue is found to be constituted especially of elastic fibres, with nuclei contained in a network of cells; in appearance fusiform. At the moment even of the appearance of the "plaques" there can be seen by the microscope upon the internal surface of the amnios, and at first upon that part of this membrane which covers the umbilical cord, a species of *spot* formed by epithelial cells; then in the centre of that spot can be seen groups of glandular cells, at first in very small numbers; and it even happens that at the very first appearance of this "plaque" it seems to be formed of only one or two glandular cells. The glandular or glucogenic cells are distinguished from the epithelial cells which accompany them, first by their form, and afterwards by their reaction with iodine. In fact, if a little of the acidulated tincture of iodine

be added to a papillæ, or to the amniotic "plaques," and placed under a microscope, the cells will very soon be seen to take a wine-red color, while the epithelial cells will remain colorless, or become slightly yellow. Little by little, the groups of glucogenic cells increase by their development, and take the form of papillæ, particularly upon that part of the membrane which covers the cord. Examined under the microscope, these papillæ are found to be constituted of glucogenic cells, covered by epithelium. When the acidulated tincture of iodine is added, these glucogenic cells of the papillæ become of a wine-red color, especially at their base, which is distinctly separated from the tissue which surrounds it. The hepatic "plaques" are composed of the same elements as the papillæ. It is very difficult to know if, in their agglomeration, they should be considered as a union of papillæ, or as having another mode of growth. All that can be said is, that they are seen to extend themselves by their circumference, which offers well developed glucogenic cells; while in the centre, these cells seem sometimes to be at a stage of development less advanced. When the cells are broken and the anatomical elements mechanically separated, the isolated cells are obtained sometimes with a nucleus and sometimes with a nucleolus, and containing a granulous substance. This substance takes a wine-red color with the tincture of acidulated iodine. The core or nucleus, the volume of which seems susceptible of variation under re-agents, does not always take the same color with the iodine. The cells of the hepatic "plaques" of the amnios offer, moreover, a great analogy of form and of reaction with those of the liver in a state of action.

The cells of the amniotic covering and those of the liver may be separated by macerating for a time a portion of the tissue of these organs in a concentrated alcoholic solution of caustic potash. Then the contents of the two orders of cells remain insoluble, and fall to the bottom of the liquor in the form of a whitish matter, which presents, under the microscope, either the primitive form of the cells, or amorphous granulations. If, then, the excess of potash is saturated by crystallizable acetic acid, and the tincture of iodine be immediately added, the wine-red color appears with even more intensity than in the fresh cells.

When the hepatic coverings commence to grow yellow, to fall, or to be absorbed, or to degenerate into fatty matter, changes can be perceived in their microscopic structure. The glandular cells lose in general, at first in the nucleus or core, and at the same time the glucogenic matter; so that in heating, under the microscope, one of these altered coatings with the acidulated tincture of iodine, a mingling of cells is seen, of which some are of a wine-red color, while the others remain colorless. It is proved, besides, that the cells remain colorless, are deprived of their nucleus and of their granulous contents. At the same time there is a perceivable difference between these two extreme conditions; there are some of the cells from which the nucleus and the granulous matter have almost disappeared, and in which the wine-red color is hardly perceptible.

A little later, when the "plaques" of the amnios are formed of cicatrices, only the flattened cells are found, but entirely deprived of their nucleus, and in which it is impossible to find the least trace of glucogenic matter. Later, these cells disappear entirely. When the "plaques," instead of falling or disappearing, degenerate into fatty matter, the microscope proves their presence; at the same time mingled with this fat are seen beautiful octohedral crystals, which present the same characteristics as the crystals of *oxalate of lime*, inasmuch as they are insoluble in water, or in *acetic acid*. It is unnecessary to add, that there is a complete absence of glucogenic matter in the degenerated hepatic "plaques." If now we examine, together, the evolution of the hepatic "plaques" of the amnios and the organization and development of the texture of the liver of the fœtus, we shall be struck with the connection, constant and *inverse*, which is observed between the development of the cells of the liver and that of the hepatic "plaques."

During the first stages of embryonic life* while the amniotic "plaques" are well filled with glucogenic matter, it is proved that if the liver of the fœtus, then very soft, and composed only of embryonic cells, rounded or fusiform, be dissolved in the alcoholic solution of potash, it is not colored by the iodine, nor has it any of the characteristics of the glucogenic cells. At that epoch the tissue of the liver shows not the least trace of glucogenic matter.

At the end of their period of growth, when the glucogenic cells of the amniotic "plaques" commence to disappear or degenerate, it is found that in the liver of the fœtus, the cells having acquired the definitive form of the cells of the liver, inclose one or more nuclei with their granulous contents, which are not soluble in the alcoholic solution of potash, and they take the *wine-red* color of the iodine after the alkali has been saturated with acetic acid. It is at this epoch that the glucogenic matter can be extracted from the liver of the fœtus, which has become more firm, exactly like that found in the liver of the adults.

Later still, when the "plaques" have completely disappeared, or have entirely degenerated into fatty matter, and the fœtus is near the period of birth, it is found that the tissue of the liver, which has become as firm as in the adult, is composed of the anatomical elements which have taken their definitive form. All the cells of the liver are then filled with glucogenic matter, which can be extracted in as great abundance as from the best-fed adult animal.

From the summary of all the facts contained in these experiments the following conclusions may be drawn:

First. There exists in the placenta of the mammiferæ† a func-

*In the commencement of fœtal life in the embryo of the calf, that is, at three or four centimetres length, I have not been able to perceive the "plaques" of the amnios. Perhaps, then, the glucogenic cells may be found in the umbilical vesicle.

†In birds (the hen) I have proved the existence of the glucogenic cells which develop themselves in the walls of the gizzard before the development of these cells in the liver; but not having been able to follow completely their evolutions, I will treat that subject in another communication, confining myself at this time to the mammiferæ.

tion which until now has been unknown, and which seems to supply the glucogenic function of the liver during the first period of embryonic life. This function is located in an anatomical element, glandular or epithelial, of the placenta, which in certain animals is found mingled with the vascular portion of that organ, and which in the ruminantia presents itself separately, forming upon the amnios, plaques in appearance epithelial, which without doubt everybody has been able to see, but of the use of which, until now, they have been ignorant.

Secondly. This temporary hepatic organ of the placenta, in permitting the direct study, in an isolated anatomical element, of the production of glucogenic matter, confirms and proves by a new example what I have before declared, that is, that the formation of the starchy glucogenic matter takes place both in the animal and vegetable kingdoms. The observations in this paper furnish us with still more striking analogies; since we see the starchy glucogenic matter accumulate around the embryo animal, just as in plants we see it accumulate in grains around the embryo plant.

Thirdly. The glucogenic function commences at the commencement of fœtal life, and before the organ which is the seat of that function in the adult is developed. But it is located in a temporary organ belonging to the appendices of the fœtus.

Fourthly. All that has been said in this paper relates only to the glucogenic function of the liver. But now the question would be, whether the biliary function which the liver possesses in the adult is equally accomplished by the hepatic organ of the placenta, as we have described. The question should be stated in these terms: to know if the glandular cells are charged with two functions, which for the time are connected, and answer one for the other; or if, on the contrary, the liver should not be considered rather as a complex organ, in which are found mingled distinct anatomical elements, the one destined to the formation of starch, and the other for the formation of bile. This question, which up to the present time anatomists have not been able to solve, in spite of the numerous works of which the liver has been the subject, seems to me to be susceptible of enlightenment, and even of decision by physiological researches, made on the one hand upon the embryonic development of the function, and on the other upon the inferior animals. I have undertaken experiments on this subject, of which I will render an account to the Academy as soon as they are completed.

The Medical Practitioners of Ancient Rome. By E. R. PEASLEE, A.M., M.D.

The adage, "*nusquam medicina non est,*" implies that there never has been a nation or tribe in which the practice of medicine has not, in some form, at all times obtained. But, on the other hand, much stress has been put upon the assertion of Pliny the elder, who wrote

A. D. 78, that during the first six hundred years after its foundation, or up to B. C. 153, Rome had no physicians.

Pliny's assertion, however, if correct, does not disprove the adage so far even as Rome was concerned; for there has always and everywhere been much medical practice, independent of physicians; and we have no reason to doubt that the sick were treated and taken care of at Rome, from its very foundation, by those best qualified for this office. In regard, however, to the advent of physicians, properly so called, to Rome, Pliny must have been mistaken.

Two circumstances are calculated to invalidate Pliny's statements on this subject:

1. Pliny was not a medical man, but a laborious compiler of various departments of knowledge; his "Natural History," consisting of thirty-seven books, treating of cosmography, astronomy, geography, physics, agriculture, commerce, the useful and fine arts, the moral constitution of man, the history of nations, natural history proper, and medicine. He is said to have condensed his materials from more than two thousand authors, and from the reading of his whole life.* But he, like many others of his countrymen, cherished a strong prejudice against the medical profession, and hence his testimony must be accepted with some degree of allowance.

2. The authority of Cato the Censor, who wrote about B. C. 170, or about two hundred and fifty years before Pliny, is mainly relied upon by the latter, in his statements respecting the medical profession in Rome. Cato, however, wrote not long after the time when physicians first came to Rome from Greece, or about the year of the city 583; and he manifested a violent hatred against the whole medical profession. Medicine had been first practiced at Rome under the patriarchal form; the oldest and best instructed of the relatives treating the diseases of his family as he understood them. Old Cato himself had been much interested in his domestic medicine, and had even written a book on the subject, in which he recommended cabbage as a sovereign remedy in many cases. He also venerated the number three, after the manner of the Pythagoreans; and transmitted to posterity an incantation for curing a dislocation or a fracture, which is too curious to be lost. "For curing a luxation of the hip," says he, "take a divining-rod, four or five feet long, split it in the middle, and let two men hold it at the hip and begin to sing: '*In alio, s. f., motas vœta daries dardaries astataries dissunapiter,*' until the injured parts are united. The luxation being reduced, or the fracture set and properly adjusted in splints, repeat the incantation every day as at first, or the following: '*Huat hanat huat ista pista sista dominabo damnaustra;*' or, after this manner: '*Huat haut haut ista sis tar sis ardunnabon dunnaustra.*'"—Watson: from Cato de Re Rustica, Cap. clx.

It is very natural that a person in this state of mind should conceive a violent antipathy for any attempt at scientific practice, and especially if made by foreigners, professing superiority to the

* Dr. J. Watson: "The Practice of Medicine in Ancient Times," p. 139.

method then in vogue. There are narrow-minded and bigoted persons at the present day, also, among the educated, as they are self-styled, who denounce everything that is really scientific in medical practice, and laud some one of the various phases of quackery instead; and who would speak of the present race of physicians very much in the style in which Cato denounced the doctors of his time, in a letter to his son Marcus, and from which Pliny makes a quotation: "I will tell you," said he, "when I have an opportunity, what I think of these Greeks. It is good to study to some extent, their letters and sciences, but it is not necessary to learn them fully. Be assured, as if a prophet had told you, that, as soon as this nation shall have communicated to us its literature, it will spoil and corrupt everything; and this will be so much more easily effected, if it sends us *also its physicians. They have sworn among themselves to kill all barbarians by their medicine,* and yet they require pay from those whom they treat, in order to gain their confidence, and thus ruin them more easily. They are insolent enough to call us barbarians, and even treat us more disdainfully by calling us *opiques.* In short, remember that I have forbidden you to employ physicians."*

In the 5th chapter of the 29th book, Pliny expresses his own opinion of medicine, as follows: *Mutantur ars quotidie, toties interpolis et ingeniorum Greciæ flatu impellimur: palamque est, ut quisque inter istos loquendi polleat, imperatorem illico vitæ nostræ necisque fieri: ceu vero non millia gentium sine medicis degant.* "The art is changing daily, assuming a new dress as often as we are carried away by some new-fangled notion from Greece; and when one of these fellows gains an ascendancy by his talking, he becomes on the spot an arbiter of life and death to us; as if thousands of nations do not get along without doctors." It must be admitted, that this last sentence contains a somewhat random assertion; and it is in the same passage that he says that the art was not practiced among the Romans until the six hundredth year from the building of the city, or B. C. 153.

But though the old censor's mind was too full of prejudice and suspicion to admit of his being a reliable witness as to the merits of the physicians of Rome, he leaves us no doubt of the fact that physicians were engaged in practice there before the time specified by Pliny. In fact, Pliny himself says (chap. 6 of book xxix.), that a surgeon came to Rome in the five hundred and thirty-fifth year after its foundation, and that he received a most cordial welcome at first; but shortly, from his cruelty in cutting and burning, they called him a butcher, and his art a nuisance.

It is, however, very probable that both Cato and Pliny were not very much in the wrong in attributing to the foreign doctors in Rome a low degree of actual professional merit. It very seldom happens that the best physicians leave their native country, since such are always sure to be appreciated and required at home. And at this time, and long afterwards, as Galen informs us, those who flocked to Rome from Greece and elsewhere, were mostly fifth rate

* Cato De Re Rustica. Renouard's Hist. of Med., p. 249.

doctors, or miserable mountebanks. It is said that even Asclepiades himself, the friend of Cicero, and who settled in Rome B. C. 63, descended to some of the low methods of quackery; and long after him, Thessalus, when he appeared in public, was always accompanied by a troop of bakers' boys, butchers, weavers, carders, and others of the lowest classes, whom he called his pupils, and whose vulgar language he used. He was, however, patronized by the Emperor Nero, and acquired immense wealth.

Galen explains the fact, just stated, in the following passage, and it is now as applicable to New York as it was 1,700 years ago to Rome: "In a vast and populous city, like the capital of the Roman Empire, it is easy for a stranger, and even for a citizen, to conceal his name, his birth, his fortune, and his conduct. A man is only judged by the luxuries he displays and the arrogance he exhibits. If accidentally he is discovered, it will suffice him to change the location; while in a small town, all the inhabitants know each other; a man's relatives and education are so well understood that fraud is impossible."

And among the various forms of charlatanry in those days, the water doctors also flourished. The system of Thessalus was overthrown by Crinis, of Marseilles; and after the latter, says Pliny, (chapter 5th of book xxix.,) there came along one who entirely outshone all preceding hydropaths. "Condemning all former physicians, and the baths then in use, he persuaded his patients to use cold water during the rigors of winter. He plunged sick people in ponds. We have seen aged consular gentlemen freezing themselves from sheer ostentation. We have also Annæus Seneca's* personal statement in proof of this. Nor is there any doubt that these fellows, seeking fame by any form of novelty, would in a moment sacrifice our lives for lucre."

There is no reasonable doubt, therefore, that Rome had her physicians at least more than half a century previously to the time specified by Pliny. But in order to settle this question independently of history, I some time ago consulted the Latin poets, expecting that, since dramatic poetry finds most of its inspiration in the pleasures and pains of daily life, I should find in the Latin comedies some allusion to the early physicians of Rome. And not to adduce other authors and other allusions, I find that in two of Plautus' comedies—Amphytrion and Epidicus—the doctors' shops are spoken of in connection with the barbers' shops; "medicinis" and "tonstrinis" being the terms used. In another of his pieces, entitled "Aulularia," I find a line demonstrating the fact that about the year of Rome 560, there were persons called doctors, who prescribed for a fee. It is this:

"Numo sum conductus, plus jam medico mercede est."

A learned commentator, (M. J. Naudet,) shows that "numus" means a "didrachma," (two drachmas,) or abut 32 cents. "*Numo sum conductus,*" *I am responsible for* 32 *cents:* and whole line may be rendered; "*They have lent me* 32 *cents—not enough to pay the*

*Letters to Lucilus, 53 and 83.

doctor." If we suppose that three drachmas only, instead of two, or 48 instead of 32 cents, was the doctor's fee, and remember the comparative value of money, then and now, we need not wonder after all, that some of our confreres of those times got rich, and even possessed slaves; as is said in a comedy, entitled "The Captives," to have been the case with a doctor Menarcus.* I pretermit similar illustrations from other poets, but shall, I trust, be pardoned for adducing from Plautus a pun at the expense of our fraternity. In the little scene of "Rudens" two slaves exchange the following pleasantries:

"Ut vales?" "How are you?"

"Quid tu, num medicus quaeso es?" What is that to you? are you a doctor, pray?"

"Imo, edepol, una littera plus sum, quam medicus." "Yes, by Pollux, and one letter more than a doctor."

"Tum tu est mendicus." "Then you are mendicus, (a beggar,) and not medicus."

"Tetigisti acu." "You have hit it."

The facts, then, in respect to the medical profession in ancient Rome are simply these: For a long time after its foundation, medicine was practiced at Rome under the patriarchal form, as before explained. In the time of Caius Marius, however, the city had become well supplied with physicians. But Asclepiades was mainly instrumental (B. C. 63) in introducing scientific medicine, as then understood by the Greeks, and as laid down especially by Hippocrates nearly 300 years before. Meanwhile, of the native Romans, only slaves, male and female, were physicians at Rome; and this continued to be the case till Cæsar decreed to all who practiced medicine the rights of citizenship. It is, therefore, not strange that the low social rank of the early Roman physicians prevented them from gaining a conspicuous place in history. In Athens, on the other hand, it was forbidden by law that a slave or woman should practice medicine; and thus a dignity was imparted which secured its transmission to succeeding times.

Galen came to Rome, from Alexandria, then the best school of medicine in the world, in A. D. 159, being 28 years of age. But he met with so much opposition from professional brethren, whom he in turn denounced as ignorant quacks, that he returned at the end of five years to Pergamus, in Asia Minor, his native place. He was, however, soon recalled, to attend the Emperors Marcus Auralius and Lucius Verus; and having cured the two sons of the former of fevers, which the other physicians had predicted would prove fatal, he attained a distinction which enabled him to defy the powers and finally to ruin the credit of his former opponents. His writings were regarded as the supreme authority in medicine, and especially in anatomy, for 1,400 years after, or till Vesalius published his work on the structure of the human body, in 1543; and in the practice of medicine his authority was not materially shaken till a century later, and when the importance of Harvey's discovery of the circulation of the blood began to be appreciated.

*Meniere Etudes des Poetes Latins.

It requires a great mind to appreciate the true dignity and value of our art. The rights accorded to practitioners of medicine by Cæsar, were therefore confirmed by Augustus, Vespasian, and several succeeding emperors. Augustus loaded his freedman, Antonius Musa, with wealth, for having cured him of a dangerous illness; raised him, by consent of the Senate, to equestrian rank; erected a bronze statue to his honor, near that of Æsculapius; and at his instigation conferred important privileges on the whole body of the profession residing in the city. (Watson, p. 98). Subsequent emperors did not, however, adopt the liberal policy of their predecessors. Nero patronized the audacious and vulgar Thessalus, and we find that within three centuries after the time of Galen, the practice of medicine had again fallen mostly into the hands of slaves; and that the Code of Justinian, promulgated about A. D. 500, fixed the legal price of physicians, male and female, at 60 solidi, or $257 12.

Thus Rome constituted no exception to the adage with which this article commenced, and Pliny was simply mistaken in his date; being led into the mistake by his prejudice against the profession, and the desire to show that the class of educated physicians is of very little importance to the commonwealth.

Westminster Hospital.—Epilepsy for thirty-two years in a man aged forty-four, with Discoloration of the Skin from nitrate of silver; Operation of Castration. Under the care of MR. HOLTHOUSE.

Among the causes of epilepsy mentioned by various writers, extreme sexual excesses are considered as not the least important. They would appear to have much influence on the frequency of the fits, as is shown in the narrative of the following case, the notes of which were taken by Mr. H. Ponsonby Adair, house-surgeon to the hospital. There are cases on record in which castration has been resorted to as a means of relief. In one reported by J. P. Frank, the *aura epileptica* began in the testicle, and it is asserted that a permanent cure followed castration.

This operation is much practiced among the Eastern nations, for the sole purpose of depriving their slaves of manhood; and Mr. Curling informs us, in his work on the "Diseases of the Testis," that in Italy it was once frequently performed on account of its effects on the vocal organs.

Eli B———, aged forty-four, widower, native of the United States, bookseller, was admitted into Luke ward, in the above hospital, on the 4th of January, under the care of Mr. Holthouse, in order to have the operation of castration performed for the cure of epilepsy.

The patient is one of fourteen children, of whom eleven are living and healthy; his father is alive, aged eighty-four, and his mother died at eighty. There is no insanity in the family, nor is any mem-

ber of it afflicted with epilepsy. He was a healthy child till he was ten years of age, when he commenced to practice masturbation, and soon after had an epileptic fit, in which he bit his tongue. This was followed by severe pain in the head, and incapacity for exertion next day. The fits recurred every three or four weeks. They came on suddenly without any premonitory symptoms. During the first two years he took "skull-cap tea," without effect; his diet was also regulated. He still continued to practice self-abuse, and did not finally relinquish it till he was twenty-two, about the time when he began to take nitrate of silver. For two years he tried homœpathy, the fits increasing in severity. He was at school up to the age of fifteen, when he tried a sea-voyage, but without benefit. Having returned, he sailed for South America, where he remained two years, the fits being as frequent as before. While at New York he contracted gonorrhœa, having been accustomed to frequent sexual intercourse from the age of sixteen, in addition to the habit of self-abuse. He remained in New York for a few months, trying various remedies, among them sulphate of zinc, but without relief. He went again to the south for a few months, and upon his return he placed himself under the care of Dr. Kissam, who prescribed nitrate of silver, in doses of one-eighth of a grain, three times daily, and in two months it was increased to half a grain. Very soon after he began to take this remedy the severity and frequency of the fits began to decrease, and he was so convinced of its efficacy, that he continued its use for about eight months, against the advice of Dr. Kissam, who feared it might affect his skin, which, indeed, it did to some extent, giving it a blue tint. At the end of this time, the fits left him for a period of two years, having gradually decreased in frequency under the use of the nitrate of silver. From the time of his contracting gonorrhœa till his marriage, he abstained altogether from sexual intercourse and the habit of self-abuse, so that during the whole time that he was taking the nitrate of silver he had no extraneous sensual excitement; yet during this period he says that he was constantly troubled with nocturnal erections, and frequent seminal emissions. Being now twenty-four years of age, he again became addicted to sexual excesses. He left his wife and his business for several months, and traveled; the fits, however, recurred every three or four weeks, and were very severe. On his return his wife died, and he remained a widower six years, abstaining altogether from sexual excesses, although frequently troubled with erections. During the six years he broke his arm, several fingers, and his leg twice, whilst in the fits. At the age of thirty he married a second time, the fits having increased in number and severity. He was often compelled to send his wife into the country for a day or two, in order to avoid sexual excitement. The fits now recurred daily. His wife died a year after marriage. After this he again abstained from sexual excesses. Dr. Horace Green, of New York, now cauterized his larynx daily with nitrate of silver, and at the end of three or four months he would be free from fits for nineteen days; when they did recur, they were so slight that he scarcely

lost consciousness, and did not fall down. This plan of treatment was pursued for two or three years, at the end of which time he became attached to another young woman, which revived all his old amatory feelings, and the fits began to increase in frequency, recurring at intervals of fourteen days, when they would continue daily for a week, and then cease for fourteen days more. Galvanism was now tried with some slight beneficial effect. Next arsenic, in the form of Fowler's solution, which he continued till the fits recurred daily, and he became so prostrated that he was confined to his bed. For a long time he took iron to neutralize the effects of the arsenic, but for months he was compelled to walk on crutches. He came to England two years ago to have tracheotomy performed by Dr. Marshall Hall, who had advised it when he saw the man in America. Dr. Hall died soon after the man's arrival, and he went to Paris, and was under the care of M. Nèlaton. Afterwards he placed himself under M. Trousseau, who gave him belladonna, which affected his vision but not his fits. Dr. de Lassiauve next treated him with camphor for four months without effect. He returned to England and was under Mr. Simon, at St. Thomas' Hospital, in order to have castration performed, in which he had great faith, for he attributed his fits chiefly to sexual excitement, which still troubled him much; but his wish was not acceded to. He took bromide of pottassium without any benefit, and then the nitrate of silver for two or three months, in half-grain doses three times a day. The skin became darker than before, and the fits recurred daily. He next went to Germany, and was there sounded for a stone in the bladder on account of frequent micturition, which he has had since infancy. No calculus was present. He was an inmate of the hospitals of Vienna, Prague and Dresden. He left the latter in October, 1858, and was admitted into the Westminster Hospital, under Dr. Radcliffe, on the 30th of the month, and remained in two months, during which period he took quinine and iron, and camphor, but without avail. Since his second wife's death he has entirely abstained from sexual intercourse, though he has been constantly troubled with nocturnal erections, and occasional seminal emissions, and these continued up to the time when he came under the care of Mr. Holthouse, to whom he applied to perform castration, which after much deliberation he consented to do; and it was performed upon both testicles on the 4th of January, 1859, under the influence of chloroform. Two or three hours afterwards there was considerable hæmorrhage, which was checked by the application of cold. He had one fit during the hæmorrhage. His face has a bluish-slate tinge, which pervades the body, but the color is darkest on the face. His fits are of the rotary kind, preceded by a sudden scream, and lasting not more than a minute, and when over, he is quite himself again. In the fit which he had while in bed after the operation, he did not scream, but merely struggled violently.

Jan. 5th.—He had another fit this morning.

6th.—The fit recurred early this morning.

7th.—At four this morning another fit occurred. He says that after his second marriage the fits frequently followed immediately on the act of connexion.

8th.—Has had no fit at all to-day.

9th.—Had a very slight attack this morning, scarcely more than a giddiness for a minute. Altogether, since the operation, the fits have been exceedingly mild.—*London Lancet.*

BARTON'S OPERATION FOR STRAIGHTENING THE KNEE JOINT BY EXCISION OF A WEDGE-SHAPED PIECE OF BONE.—DR. MASON WARREN, recently read before the Boston Society for Medical Improvement, a very interesting case of this.

The patient, a man 25 years of age, applied to Dr. W., in September, 1850, "on account of a great deformity of his limb, owing to an anchylosis of the knee-joint, the leg being bent at nearly a right angle with the thigh. He stated that his prospects had been destroyed and his life rendered wretched by his infirmity; and wished, if anything could be done for him short of extreme danger to his life, that it should be attempted. The history of the case, as given by him, was this: In November, 1841, he fell a distance of three feet, striking the knee. Three days after the fall, the knee began to swell and become painful. This went on for four weeks, when it was punctured, and a pint of watery fluid escaped. It continued to discharge for fifteen months, during which time many small pieces of bone came away. The opening finally healed, leaving the joint and limb in its present distorted position. His hereditary tendencies were scrofulous. In the erect position, resting upon the sound limb, the lame foot is seven and a half inches from the ground, but he can limp about with a high-heeled boot.

"I informed the patient that the only operation which suggested itself to me, was Barton's operation, which had apparently been already described to him, and at once he requested to have it performed. I advised him to enter the hospital for the convenience of apparatus, which he did. Some of his friends attempted to deter him from running any risk, but he said he was determined either to undergo the operation suggested by me, or to have the limb removed, as he could no longer bear the pain and mortification of his condition.

"On the second of October, the operation agreed upon was thus performed: A V-shaped incision was made through the skin just above the knee-joint, the base of the triangle, two inches wide, presenting outward, with the apex at the inner side of the limb. The flap was dissected up and the bone exposed, the other textures having become atrophied from disease. A wedge-shaped piece was sawn out of the femur, the incisions not being carried quite through, so as to avoid the artery. The remaining portion of the bone was then broken; the flap was secured in its place, and the knee placed

on a double inclined plane, and firmly fixed to it. There was no hemorrhage.

"On the following day, the patient said he had passed a restless night, but was free from pain. The limb was dressed on October 7th, and placed on a splint with a hinge and screw, so that it could be extended without any shock to the joint. By the 20th the limb had been gradually brought to a straight position, and on the 29th the bones had united, and the wound was healed. Some time after this, he had a febrile attack, in the course of which the union became somewhat less firm, and threatened to dissolve; the system showing its scrofulous tendency. He gradually recovered, however, and left the hospital.

"About a year after his discharge, this gentleman presented himself to me, well. The limb was but very little shorter than the other, and with a pair of large trowsers the difference in the shape of the two limbs could scarcely be distinguished. He walked well with a cane, and the improvement between his present upright appearance in walking and his former painful method of locomotion, would have almost prevented him from being recognized as the same individual.

"In a recent conversation with Dr. Barton—whose retirement from the profession in which he acquired so much honor, is deeply to be regretted—he informed me that when he first began these operations, great danger was apprehended from the supposed interference with joints, or their vicinity. But he at once demonstrated what afterwards seemed sufficiently evident, that the delicate structure of the joint had, in these cases, already been destroyed, and that the bones might as readily be interfered with at this point as in their continuity. In some cases greater symmetry may be gained by making the excision directly from the joint rather than above it, as there is then presented a much larger surface of bone. There are also other advantages. I have seen a patient thus operated upon by Professor Mütter, with the most complete and gratifying success. Dr. Buck, of New York, has also done the operation successfully.—*Boston Med. and Surg. Jour.*, Dec. 23, 1858.

Diabetes.—Dr. Alonzo Clark called the attention of the New York Medical and Surgical Society to the history of two cases of diabetes, "in which he had resorted to a somewhat novel method of treatment, with apparent benefit. The first case was that of a physician, aged 62, residing in the central part of the State of New York. He had naturally a robust constitution, and when in health had an average weight of 220 lbs. He stated that for the past forty years, he had been actively engaged in the practice of his profession, and that he had enjoyed uninterrupted health until last spring, when his suspicions were excited by the occurrence of frequent micturition, accompanied with an increase in the amount of urine passed. He examined some of his urine, and detected the presence of sugar,

fermentation taking place readily when the fluid was allowed to stand in a warm room. Its specific gravity was 103. Gradually he grew worse, muscular power being considerably diminished, and during the months of June and July the urine still continued saccharine, and increased in quantity to a gallon per diem. At this time his strength was overtaxed in attending to the practice of another physician. He continued at work, however, until about three weeks ago, when his failing health induced him to abandon his practice, and come to New York for advice. He arrived here three weeks since, and consulted Dr. Clark. The quantity of urine passed at this time was about the same, as also its specific gravity, and chemical examination revealed the presence of a considerable amount of sugar. The fluid responded to the fermentation test in twelve hours, tortulæ were formed in six hours, and the application of Trommer's test yielded a pretty abundant deposit of the red oxide of copper. Amongst the prominent symptoms were dryness of the mouth and skin, thirst, and constipation of the bowels, the faces being unnaturally hard. In the management of his case, Dr. Clark was led, from the experience of a previous one, to advise the use of bicarbonate of soda in doses of 11 grains, repeated as often as possible, provided the urine was not rendered alkaline, or the stomach nauseated. He also ordered counter-irritation to be established at the back of the neck, the idea of doing this having been suggested by the experiments of Bernard, who was able to cause a diabetic state of the urine by irritating the medulla oblongata. A mixed diet was allowed, vegetables in moderation, and hard biscuit being included, and the patient was cautioned respecting the use of water, which was to be taken only at meal-times, and at no time freely. With these directions, he went into the country on the 31st of August, and remained until Wednesday of that week, when he again visited Dr. Clark. During the interval of absence a vast improvement had taken place. He could now sleep eight hours, and on rising, passed less than a pint of urine, the quantity passed daily not exceeding three pints. He complained no longer of thirst, his lassitude was gone, his bowels were natural, and his weight had increased 7 lbs.; his urine, when examined, was found to have a specific gravity of 102 20, and when subjected to Trommer's test, gave the black instead of the red oxide of copper. The absence of sugar was further evidenced by the fact that the fluid was allowed to stand in a warm place over forty-eight hours without fermentation. Tortulæ were likewise absent, and in their place was a moderate number of crystals and oxalate of lime. The patient was sent home to continue the same plan of treatment.

"The *second case* was not as striking as the first, but yet was one of diabetes, treated in a similar way and with similar results. The patient was a gentleman who had once been under the care of Dr. Van Buren, and was seen by Dr. Clark two years ago. He then stated that he had suffered from the disease nine years previously, and that under the use of bicarbonate of soda, he had recovered and remained well for more than six years. At the time he applied

to Dr. Clark, he was passing about a gallon of urine daily, which, on examination, was found to contain sugar; he also suffered the usual symptoms of the disease. He was put upon bicarb. soda, and a stimulating liniment, which, when rubbed upon the back of the neck, produced a sore that lasted for several weeks. During this period, he improved rapidly. Dr. Clark remarked that the results in these two cases were so satisfactory, that he thought himself warranted in recommending the same means of treatment for further trial.

"At a subsequent meeting of the society, Dr. Clark made a further report concerning the treatment of diabetes by blisters to the neck and administration of bicarbonate of soda. Since the time of the last notes, he had had three cases in which to test it. The first passed a gallon of urine a day, and used soda for three weeks without benefit. The stomach was disordered by it, and the patient unable to continue the treatment.

"The second passed seven quarts a day, of specific gravity 100.43; took soda for two and a half weeks, after which the amount went up to eight quarts, of specific gravity 100.4. This case left the hospital before treatment could be conducted to a close, or the remedy fairly tested.

"The third case, which passed ten pints per diem under blisters and soda, did not improve at first, but the dose of soda, being carried up to ʒiiss a day, the urine soon diminished in amount to six pints, of specific gravity of 100.28. That day only two quarts had been passed, and he seemed improving.—*New York Med. Jour.* Jan., 1859.

Scientific and Practical Medicine.—There are two very remarkable characteristics of the medicine of the day: one is the great advance made in laying a *scientific* basis for the practice of the healing art; the other is the vast amount of successful practice which is carried on by those who have neither time nor opportunity for scientific pursuits. On the one hand, we have a precise physiology, supported by profound chemical and physical research, and a minute pathology, reared upon a platform whose pillars are the microscope and the test-tube, and whose approach is over manifold steps of minute statistical research; on the other hand, we have the remembrance and renewed impressions of bedside experience towards guidance in the treatment of disease. The former come to us chiefly from the study of the *savant;* the latter are the right of every one who deals with human disorders. To appreciate the one kind, necessitates more knowledge than the mass are drilled to; to make avail of the other, is the daily duty of all at the sick man's bedside. It is found, moreover, that those who are most disposed to the attractions of the first, are least inclined to the charms of the second. We need scarcely wonder at this. The *science of medicine* captivates men endowed mainly with the reflective and analytic powers of the

mind; whilst the *practice of the healing art* allures those of acute observation and rapidity of perception, and who anticipate utilitarian results. Both have their places, both are requisite, and it is the duty of both to cordially affiliate with each other. The practitioner of medicine must recognize in his scientific *confrere* the laborer and builder-up of much knowledge, which, becoming insensibly interwoven with the teaching of the time, endows him (how, he knows not) with axioms of scientific certitude, in whose truthfulness he may safely repose. The *savant* should feel, on his part, that in the acute practitioner exists that "*aliquid in medico quod neque dici neque scribi posse,*" and to which nothing but repeated clinical experience can ever hope to give birth. We have heard a living physician of much experience and valuable common sense, assert, that though we can now *talk about disease* much more fluently and satisfactorily, apparently, than in his younger days, yet we cannot *cure* it a whit the quicker. There is much truth in this remark, the spirit of which was, twelve years back, well insisted upon by Dr. P. M. Latham, in the preface to his admirable Clinical Lectures upon Diseases of the Heart. He said:

"All things should have a consideration bestowed upon them in proportion to their importance: the question is, whether the treatment of disease has, upon the whole, had as much as is due to it.

"During the last quarter of a century, physicians have labored very hard, and, upon the whole, very profitably; but their labor has been bestowed in unequal degrees, and consequently with unequal success, upon the objects which concern them. Pathology and diagnosis have had much more of their regard than treatment. Thus our knowledge of disease in its essence has been greatly enlarged, and our skill in detecting its present existence and seat in the living body has been made much more exact and sure; while our ability of influencing its progress and events by medicine has not been proportionally increased."

So true is this, indeed, that it may be questioned whether we can now treat rheumatism better than in the days of Fordyce and Fothergill; gout more satisfactorily than in the time of Heberden: scurvy, than in the days of Sir Gilbert Blake; diabetes, than in the time of Rollo; or albuminuria more surely than when the illustrious physician who has so lately been taken from our side made known to us the remarkable affection known over Europe as "Bright's disease of the kidney." And yet what laborious chemical and microscopic investigations have been undertaken in modern times, in illustration and explanation of the pathogeny of these diseases! How scientifically their causation has been attempted to be shown! How admirably the therapeutic doctrines have been made to flow from what *science* has told us of these causes of suffering! And, nevertheless, thousands, of practitioners, who have comparatively little knowledge of the scientific relations of these diseases, are as successfully treating them as their nature permits; and others, to whom their chemical microscopic exposition is familiar, make very often sorry attempts at a satisfactory *clinical* result. Whilst some endeavor

to prove that the scientific medicine of the closet must necessarily be the basis of safe therapeutic interference in human suffering, others seem to be led to the belief that the more scientific the pathology, the less reliance is there to be placed in any system of treatment.

Such appears to us to be the fundamental belief at the bottom of the new medical philosophy of the school of Vienna, and of which Skoda is the high priest. We have a new school, it seems, called *Skodism* and its disciples are termed *Skodists*. We are told by Dr. Gallarvardin,* that amongst the clinical teachers of Germany there is one who is making a universal reputation by *skepticism*. This is Skoda. Medicine has never witnessed a doubter so absolute as he is. He is not only a doubter in theory; he is a fervent skeptic in practice. He conceives it to be his duty to teach practical skepticism at the sick man's bedside. It is said to be impossible to divine the remedy which Skoda will use in any case. Every year, during nine or ten months of clinical instruction, he employs on his twenty-eight patients *in succession* all the more classical and celebrated means of cure! And with what intention? Why, merely to convince his class that every system of medication is always and completely inefficient! If after any plan of treatment there supervenes a prompt and very marked amelioration, of which explanation must be rendered, this great Pyrrhonist in our art then attributes all the honor to the natural course of the disease.

"A young man, of nineteen, very robust, comes into the hospital on the 11th of May, on account of a pneumonia of the right lung, of a highly inflammatory and severe form.

"On the 13th and 14th Skoda causes him to take infusion of foxglove, which induces six stools a day.

"On the 15th, a pound of blood is drawn from his arm by his orders.

"Next day (the 16th) the pulse, which on the preceding evening was at 106, falls to 66."

To explain so notable and prompt a modification of the pulse, Skoda expresses himself in these terms:

"Perhaps it is the effect of the bleeding—such things have been; perhaps, too, it may have been the effect of the foxglove—that has been seen too; it may also be considered as connected with the natural evolution of the disease—that has been seen too."

Skoda, we are told, reasons habitually after this fashion, never denying in a very decided manner. In this way, little by little, he *insinuates* doubt into the minds of his disciples, all the more surely that he does not insist on its reception; so that, finally, they insensibly lose all practical faith, and raze from "their medical vocabular the word *causality*, just as their master does." Skoda, we are informed, never quotes a single physician who lived before the present century, thinking it perfectly useless to know how the problems of scientific and practical medicine (always the same at all times,

* Edinburgh Medical Journal.

and in all places, having always for their subject "man sick") have been discussed and resolved, not only by Hippocrates, Galen, Baglivi, Stahl, Boerhaave, but even by the men who have shed such lustre upon his own school of Vienna, viz: Van Swieten, Stoll, Hildebrand, and the two Francks.

THE PRICE OF LIFE.—It was lately said, and truly enough, by one of the most eloquent and thoughtful of Englishmen, that it is a melancholy thing to reflect how continually we all of us live upon the lives of others; and that in two ways, namely, upon lives which we take, and upon lives which are given. For that life is taken in unnumbered instances in which, under the influence of crushing commercial pressure, or tempted by the bait of higher rates of pay, men are occupied, without sufficient protection or guardianship, in dangerous employments involving more than an average loss of life, for which life we pay, thoughtlessly, in the price of the commodity, which so far is the price of blood. It is, indeed, a well-established fact that, even at the present day, there is scarcely an art or science which has not some concomitant circumstance of danger or disease. And thus, though slavery is numbered with the things that are passed, and we should shrink with horror from the purchase of human bodies, we bargain daily for human life. "A cry from the potteries" has told such a tale of the population of North Staffordshire. The able writer who assumes this name has not hesitated to assert that "the disabled potters are human sacrifices whom the dust of flint and burnt earths, the heat of the colossal ovens, the draughts of cold air through those blind and shapeless burrows, and the strong poisons of the mystery, force into early decrepitude. Amongst them all, the dipper is conspicuous. He breaths the arsenic of the glaze, and must imbrue his hands in the mixture. He has swellings of the joints; he is paralyzed; he dies not unfrequently while yet a boy, in bodily torture, and raving mad. Such are the potters' broken vessels, and in their behalf there arises naturally a cry for justice."

Absolute denials have been lavished in reply to this statement. It is asserted that the mortality is not high; that the pretended frequency of disease, insanity, and early death, has no existence. If this be so, it is well that the calumny should be brushed off; but it is assuredly not harmful that men should be reminded of the excessive mortality which is still incidental to many occupations, arising partly from pressure of population, but more "from carelessness and cruelty in masters and consumers, from desire of cheapness, or blind faith in commercial necessities."

The Factory Inspectors' Reports for the half-year ending 31st October 1858, just published as a blue-book, show a painful total of accidents, with forty-one deaths. The work-shops of the world are replete with dangers to the life and health of the workers. It is

just to recognize the fact that science has striven to abate these incidents of death, proportionally with the development in manufacturing skill and industry. But Sheffield grinders and Whitechapel sempstresses, the glass-blowers of Whitefriars, the miners in our collieries, and, above all, the guardsmen of our army, know but too well that their span of life is unnaturally contracted by the influences of their occupations.—*Lancet.*

From the London Lancet.

The "Dead-Alive." By R. B. NASON, ESQ., M. R. C. S.

SIR:—An article, "The Dead Alive," in your last impression* demands of me a veritable statement of the case alluded to. The subject of the inquiry is still living, and some time past has afforded me scope for observation.

I have only been waiting for a termination of the case, either in convalescence or death, to enable me to give to the profession, through your valuable columns, a full and truthful history of this rare and curious case, replete with interest. The exaggerated statement which has gone the round of the press, has produced such great curiosity in this immediate neighborhood, that I have been applied to by many parties, professional and non-professional, to be permitted to see the case, the parents of the patient having refused admittance to all strangers.

The case having extended over a long period, and fearing a detailed account might occupy too much of your valuable space, I have condensed the matter as much as possible; but should the profession consider the case worthy of a more enlarged history, I will gladly at some future period meet their wishes, as far as my rough notes, aided by memory, will supply it.

In August, 1858, I was requested to visit Miss Amelia Hinks, aged twelve years and nine months, daughter of a harness-maker, and residing with her parents in Bridge-street Nuneaton. She was supposed to be suffering from pulmonary consumption. I found her much emaciated, and complaining of headache; great lassitude; loss of appetite; short cough; secretions morbid; catamenia not appeared. I prescribed an alterative, to be taken at night, and a ferruginous tonic three times a day; a generous, though mild, nutritious diet, which she continued some time with benefit. I could not detect any chest disease. She then went into the neighborhood of Leamington, for change, to visit some friends, and after a short stay became much worse. Her parents, being apprized of her state, fetched her home as soon as possible. On her arrival I was requested to see her. I found her very attenuated, and complaining of great debility, headache, and loss of appetite; tongue clean; bowels confined. From this time she began to refuse food and medicine, and

*January No. p. 66.

her friends wished her not to be disturbed for anything, and daily and hourly anticipated her death. She was watched night after night in anticipation of that event happening, and on the 18th of October, about half-past three A. M., she apparently died. She is said to have groaned heavily, waved her hand, (which was a promised sign for her mother to know that the hour of her departure was come,) turned her head a little to the light, dropped her jaw, and *died.* In about half an hour after her supposed departure she was washed, and attired in clean linen; the jaw was tied by a white kerchief; penny-pieces laid over the eyes; her hands, semi-clenched, placed by her side; and her feet tied together by a piece of tape. She was then carried into another room, laid on a sofa, and covered with a sheet. Appeared stiff and cold: two large books were placed on her feet, and I have no doubt she was considered to be a swee corpse.

About nine A. M. the grandfather of the supposed dead went into the death-chamber to give a last kiss to his grandchild, when he fancied he saw a convulsive movement of the eyelid, he having raised one of the coins. He communicated this fact to the parents and mourning friends, but they ridiculed the old man's statement and said the movement of the eyelids was owing to the nerves working after death. Their theory, however, did not satisfy the experienced man of eighty years, and he could not reconcile himself to her death. As soon as I reached home, after having been out in the country all night, I was requested to see the child, to satisfy the old man that she was really dead. About half-past ten A. M. I called; and immediately on my entrance into the chamber I perceived a tremulous condition of the eyelids, such as we frequently see in hysterical patients. The penny-pieces had been removed by the grandfather. I placed a stethoscope over the region of the heart, and found that organ performing its functions perfectly and with tolerable force. I then felt for a radial pulse, which was easily detected, beating feebly, about 75 per minute. The legs and arms were stiff and cold; and the capillary circulation was so congested as at first sight to resemble incipient decomposition. I carefully watched the chest, which heaved quietly but almost imperceptibly; and immediately unbandaged the maiden, and informed her mourning parents that she was not dead. Imagine their consternation! The passing-bell had rung, the shutters were closed, the undertaker was on his way to measure her for her coffin, and other necessary preparations were being made for her interment. I ordered friction to the rigid limbs, moderately warm flannel to be applied, and other restoratives; and in about two hours she spoke, and requested to be taken to her mother's room, having been in the winding-sheet seven hours. She told her friends that she heard all they said, and knew they were laying her out; and that she heard the passing-bell ring, but could not speak. She passed a very large quantity of limpid urine; and refused food.

At four P. M. the following day she groaned heavily, bid the bystanders farewell, and relapsed into the same cataleptic state, and remained so six hours and fourteen minutes. I saw her in that state,

and tried to raise her; she fell, listlessly regardless of position or danger; and in whatever form the body was placed, it remained. She took no food between the attacks, but asked for water to wet her lips; and requested that nothing more in the shape of food might be given her, for she did not wish to eat nor drink again until she did so in heaven. For a whole week she took nothing, but lay perfectly quiet, with her eyelids firmly closed and her teeth in apposition. At the expiration of that time I told the parents of the patient that I considered it their duty to insist upon food being taken. She was coaxed and threatened, but all in vain. She would not answer any question put to her, and whatever food was forcibly put into her mouth she ejected. I then, by means of a gag and an elastic tube, fed her with beef-tea, arrowroot, and other nutritious food. At this time she commenced moaning, and continued night and day, never ceasing for ten days.

After this painful state of things her friends thought she must sink from exhaustion; but she did not appear to have sufficient power to stir; in whatever position she was placed, she remained, until changed by some of her attendants.

Her mother now drew my attention to the absence of kidney secretion, and assured me that for many days she had not voided urine. As there were more utensils in the room than the one set apart for her special use, I desired all to be removed but one, taking care that no other person made use of it. Ten days elapsed, but still no urine was discovered. I then told her mother that it was impossible—perfectly inconsistent with life; and asked if there were any closet or secret place in the room to which she had access. There was one, but it was filled with dirty linen. I asked permission to search it, when I found most of the linen saturated with urine. She had watched the opportunity of her friends' absence, and gone quietly into this closet and relieved her bladder.

At two A. M. one morning, whilst her parents were sleeping, she got out of bed, set fire to various articles in the room, and made her escape into the street in her night-dress, crying, "Murder!" The fire was, fortunately, extinguished, through the great presence of mind of the father, though at considerable cost, his hands being badly burned. She now began swearing most blasphemously, and continued to do so without intermission for sixty hours, after which she became exhausted, and relapsed into a state much resembling her former condition, in which state she has continued to the present time. Her eyelids are firmly closed, her teeth set fast, and muscles rigid. Her bowels are moved about once a week, and she passes urine daily into the bed; not, I believe, from any want of power of the sphincter. For the last month there has been great difficulty in feeding her by the mouth. The determination she evinced to resist food was extremely annoying; but I felt inclined to be as determined as she, and from that time have fed her three times a day by the rectum, giving her about half a pint of strong beef-tea and wine, alternately with the same quantity of new milk, arrowroot, eggs, &c. After the first lavements, and when I was

prepared to operate the second time, she raised her hand to her mouth, and repeated the movement two or three times, evidently wishing to convey the impression that she preferred food to be administered in a more agreeable manner; but I found, on trying to give her food by the mouth, that she was as obstinate as ever. I therefore persisted in administering food by the rectum. I ordered a certain number of biscuits to be placed on a chair near the head of the bed; the next morning they numbered one less. In the evening I requested the number might be made up, and exceeded by three; in the morning three had vanished. We found unmistakable evidence that she had eaten them.

Dec. 4th.—Her friends beginning to despair of her, and feeling anxious to know what physical strength remained, as also whether she had the will to eat and power to masticate, I devised a scheme which, if carried out properly, would not only prove to her friends that she could open her eyes and mouth too if she thought she was unobserved, but in a great measure aid me in my diagnosis, and give me a hint as to my future treatment. I said in an audible tone, in the presence of the patient, that I insisted on the father and mother sleeping in another apartment; for that she, by her conduct, was destroying their health. She should be locked in the room by herself all night. Having said so, we arranged that the father should be secreted in a closet in the chamber, with the door sufficiently open to allow him to watch her movements through the night. At one A. M. she raised herself upright in bed, opened her eyes, looked all around the room, turned down the bed-clothes, and got out of bed as nimbly as ever, and walked directly to a quantity of food, which had purposely been laid for her. She turned it over, tasted, and finally took a good supply into bed, quietly drawing the bed-clothes over her.

8th.—It is five weeks to-day since she spoke to any one. Her eyelids have been closed the whole of the time, and her mouth, too, excepting when forcibly opened; the pulse has varied very little, between 70 and 80. Her body appears much better nourished.

Having now given a description of the case to the present time, it remains for me to give my opinion as to the nature of this mysterious case. Considering that her mother has been at times hysterical, and that there has been sufficient evidence of the early development of the generative organs in most of the female members of the family, coupled with most of the prominent features of the case before us, and from many trifling though important incidents which from defective memory I have omitted, I am inclined to consider it one of hysteria of an aggravated character, complicated probably with a morbid condition of the brain. I entertain hopes that, provided I can sufficiently nourish the body until the uterine organs are more fully developed, my patient may continue to be "*The Dead Alive.*"

I am, Sir, your obedient servant,

RICHARD BIRD NASON, M.R.C.S., L.S.A.

Bridge-street, Nuneaton, December 14th, 1858.

Observations on the Isthmus of Panama, and on the Hospitals of Havana. By G. R. B. HORNER, M.D., Surgeon U. S. Naval Hospital, Warrington, Florida. (Communicated by W. WHELAN, M.D., Chief Bureau Med. and Surg. U. S. N.)

The discovery of gold in California, ten years since, has vastly increased the transit of persons, merchandise, &c., across the Isthmus—greatly augmented the importance of this strip of land, and, indeed, rendered it the great highway of nations. The most important portion at this time is the western, or most northerly of the Republic of New Grenada, which forms nearly a semicircle. This is bounded on the east by the Caribbean Sea, west by the Pacific, and north by Nicaragua and Costa Rica. The narrowest part of the Isthmus lies between Panama and Chagres, a small town at the mouth of the river of that name, and about forty miles from the former town; but the latter having a small, insecure harbor, Aspinwall has been built on the island of Manzanilla, in Navy Bay, some miles south of Chagres, and a substantial, well-graded railroad is constructed between the two places. But this was accomplished at the expense of more than a thousand lives, chiefly those of Chinese laborers. Miasmatic fevers were the principal causes of the mortality. Many, however, died of neglect and bad treatment. When a Chinaman got sick, it is said, it was common to lay him down in the woods, with some food and water by his side, and let him lie there until dead, or well enough to get away. Other patients were sent down to the hospital of the railroad company at Aspinwall, from whence every two weeks about two hundred were sent to New York, so that the precise mortality among them was not ascertained.

The railroad runs through several extensive morasses—densely overgrown with palms, wild bananas, bushes, vines, and large timber—strikes the Chagres River where the Gaton empties into it, runs up the right bank of the former, crosses it at Barbacoas by an iron bridge, passes up to Gorgona twenty-eight miles from Aspinwall, thence through a valley, bounded by several thickly wooded, very verdant mountains, and attains the summit level, which is only 487 feet above the level of the sea. From there the road gradually descends to Panama, through the valley of the little stream termed Rio Grande, perhaps in ridicule. Last year a party of men and officers from our squadron, headed by Com. Paulding and Col. Totten, chief engineer of the road, crossed the Isthmus by the railroad, closely inspected the route and bay of Panama, and reported the feasibility of a ship canal along the same route. The colonel estimates the cost at $70,000,000 for one 300 feet wide and 30 feet deep, with several locks in its course, and a breakwater at Aspinwall. The greatest obstacles to be encountered are the scarcity of native laborers, and the diseases incidental to foreigners, especially of the white race.

The bay of Panama and its numerous islands might afford an-

chorage for all the ships of the world which could be brought there; and the bay of Aspinwall could accomodate as many as would probably ever be collected in it, being two miles wide and three long; but being exposed to the north during the winter, when the wind blows strongly from the sea, it would require at least one very long breakwater, projecting into it from the eastern side of the entrance. All the Isthmus traversed by the railroad, and visible from any part of it, is hilly and mountainous, has a diversity of soil, abounds in several varieties of basaltic rocks and volcanic remains, and is very fertile naturally. Its vegetable productions are numerous—and among them are yams, maize, cassana or tapioca, coffee, bananas, plantains, palm-nuts of various sorts, including the cocoa and cabbage, which affords much oil. The mango, lime, orange, small cheremaya, a large yellow species of annona, weighing sometimes three or four pounds, and belonging to the same class of plants as the former; the sour sop, abbacata or calligator pear, and the pawpaw as large as a musklin, are likewise produced; but the orange, from neglect in cultivation, is very rare. Indeed, so poor is agriculture throughout the country, that much more of all its products is due to nature than to its inhabitants.

Papyrus abounds in the swamps; some species of cinchona are said to grow in the forests, and the cedron-bean (used as an antidote for poisoned wounds), on a small tree below Panama. Many species of cactus and of parasitical plants are found; and the latter are seen covering the monarchs of the forest, feeding upon their juices, until the stoutest trees die and crumble to dust. In time the parasites decay; those which had formed the longest vines, sweeping from the highest branches down to the ground, fall to pieces, nourish it, and help the growth of the young trees springing up in place of those destroyed. Near the sea-shore the mangrove, as if on stilts, elevates itself upon its limb-like roots, and spreads its branches high above the water, preventing all access ashore to every kind of vessels.

Both along the shores of Panama and Aspinwall, coral is abundant. Many reefs are formed of it, some are old and dry, others new and fresh; and the former, when crumbled, mixed with decomposed shells and sand, forms a very productive soil for some vegetables. Some of the finest land is upon the sides of the Chagres River, which arises in the eastern part of the Isthmus, winds along to the westward, then to the northward, just before it reaches the railroad and Gorgona; is navigable from Cruses, seven miles above, and averages about seventy feet in width, as far as Gaton. From thence it increases in size, until it reaches the town of Chagres. The banks of the river are bold, overhung with shrubs, vines and trees, and produce the sugar-cane luxuriantly.

The island of Manzanilla is on the eastern side of Navy Bay, about two miles around; it is formed chiefly of sand and coral, and in no part exceeds eight feet above high tide. Near its centre is a swamp flooded with water, and a large pond is left near the middle of the town, which was formerly a cove; but has been converted

into its present shape by being filled with earth next the harbor. This pond is nearly encircled by houses, receives the overflowing water from the swamp, and communicates with the harbor, beneath the railroad; but is a mere receptacle of filth, and mostly stagnant. The people of Aspinwall are, therefore, at all seasons infected with miasmatic fevers.

The islands in Panama Bay are numerous; some are large, all are rocky, high and picturesque, and mostly composed of sandstone, extensively used in building Tobago is the principal island, and is several leagues around; it contains some hundred people, produces the pineapple, some cocoa, tamarinds, cocoa-nuts and other fruits; and has the iron-works of the English Steam-Packet Company on a promontory, projecting towards Panama. The population of this is about 6,000, that of Aspinwall about 1,500, and both are principally inhabited by negroes, mestizos, and mulattoes. The greater part of the former in Aspinwall are manumitted slaves from Jamaica, who subsist by working for the railroad company, and by peddling and shopkeeping. They drink to excess, and are devoted to music and dancing.

The animal kingdom of the Isthmus is nearly as rich as the vegetable. The waters teem with fish; insects, reptiles, birds, and quadrupeds abound on shore. With hooks and seines are caught the red rockfish, the cavallo, a large species of mackerel, the croaker, gar, perch, and parrot-fish. The last takes its name from its being as varied in color as that bird, and tinged richly with green and blue. Mullets, porpoises, the large green turtle, crabs, and sharks likewise abound. The turtle affords a very large part of the meat used at Aspinwall; the cattle killed there, from being driven far and illy fed, are poor and insipid. A few sheep, some hogs, goats, fowls, turkeys, and ducks serve also for sustenance to the richer classes; but the poor live chiefly on yams, plantains, bananas, and other vegetable food.

Among the wild animals of the Isthmus are the tiger, wild cat, mamoss or ant-bear, the deer, several species of monkeys, the alligator, and zæcæ, a large species of hedge-hog, of a brown color, and having dark stripes on his back. Alligators abound in the Chagres River and other watercourses, on the banks of which they catch fish and dogs, and within a few years have killed several persons.

Climate.—This is always sultry, never really cool or dry. The thermometer averages from 80° to 85° during the day, when the wind is blowing towards the land; but when off of it, as it generally does after 8 o'clock at night, it falls frequently to 76°, sometimes to 74°: and then from the free perspiration and sensibility of the skin, imparts such a sensation of coldness as to make woolen clothes pleasant. At Panama the heat is sometimes above 90°, and is more oppressive than at Aspinwall, where, in spring, summer, and fall, the wind mostly blows from the sea during the day, and from the land at night. During the winter it blows commonly from the northeast in the day, and causes a heavy swell in the bay. In the summer

season it blows occasionally in squalls from that quarter, and is so stormy as to endanger ships at anchor there. After a tempest in winter, some years ago, so heavy a swell occurred, that three or four vessels were wrecked on the eastern shore of Manzanilla. One broke through the high, strong wharf of piles and planks, owned by the United States Steam-Mail Company. Another vessel was driven upon a reef opposite the wharf, broken to pieces, and wrecked on the adjacent shore, where she still lies. The range of the barometer is small. It rarely rises above 30¼ of an inch, and very seldom falls below 30 inches, so that it is not considered at Aspinwall or vicinity a good indicator of the weather. Rain falls there in showers, ordinarily during the afternoon and at night, for nine months, at intervals; but rarely from the first of December to March. During the last fall we had rain, more or less, and usually after meridian, for six days out of seven. During that period the atmosphere was saturated with moisture; clothes, books and sails were spoiled with mould; small mushrooms sprang up in quantities on the tarred ropes coiled on deck, and especially on those not exposed to the sun. The rusting of all metallic substances liable to oxidation occurs correspondingly to the moisture of the atmosphere, rendered still more corrosive by the evaporation of sea-water, charged with chlorine and saline particles.

Diseases.—The most prevalent diseases among the inhabitants may be said to be those of the bowels and miasmatic fevers; but from these they are exempt in comparison with strangers from North America and Europe. All of these, who are white, are certain in a short time to be affected with some form of those fevers, remittent or intermittent, of the quotidian or tertian type. These also, I was informed by Dr. Moore, of Aspinwall, preceded the yellow fever there, as has been observed in other countries; although it is stated by Dr. Hammund, U. S. Army,* to have followed the epidemic yellow fever, at Warrington, Florida, in 1853, when it was introduced by some recruits at the navy yard, and infected the inmates of the hospital. But the crew of the Wabash were remarkably exempt from bowel complaints and miasmatic fevers. This exemption we ascribed to the men drinking exclusively the pure rain-water collected in the vast boiler-iron cisterns of the United States Steam Navigation Company, which are filled from the roofs of their buildings, and hold many thousand gallons. The people of Aspinwall also use rain-water altogether, as they have no wells, springs, or streams convenient. That our crew's exemption from diarrhœa and dysentery was owing to this water, is proved by the case of an English ship of the line, which, I understand, had many cases, after using the water of the river Mindi—a small stream emptying into the south side of Navy Bay; and some cases of diarrhœa occurring in our crew, from the rain-water being sometimes made saltish by its being brought in open boats, which had taken in some sea-water, whilst being conveyed from shore during heavy

*See the Army Medical Statistics, lately published.

swells. Our comparative exemption from fever was owing mainly to the Wabash keeping at a distance from shore, to being thoroughly cleansed, and having her crew as little as possible exposed to the sun and malaria. Few of the men were permitted to land. But many suffered from boils, lichen tropicus, and various herpetic eruptions; some from rheumatism and neuralgia. During the last of August, 1857, about one-half were effected with influenza, which first attacked the crews of our ships of war at Panama, next the people of that town and Aspinwall, and was last heard of at the island of St. Thomas, 800 miles to the eastward. Besides the above, we scarcely had any diseases of the respiratory organs to treat—not a case of phthisis occurred in many months; but one of pneumonia, attending an attack of remittent fever with hepatitis, proved fatal last October. A man on board the Saratoga likewise died of pneumonia at Greytown, 300 miles north of Aspinwall.

The cutaneous affections were very numerous and troublesome to cure. Wounds and ulcers were indolent, and so irritable that the metallic lotions, as of sulph. of zinc, nitrate of silver, and acetate of lead, appeared poisonous, especially when applied to the privates; wounds and ulcers, moreover, often bled profusely; and in the treatment of the numerous cases among the passengers from Gen. Walker's army, brought to the United States, no dressings would retain the blood. This was dark, thin, plainly venous. For the cure of ordinary prickly heat, the application of diluted aqua ammoniæ was successful; but when it became scabby and formed the regular lichen tropicus, the warm bath, citrine ointment, and a solution of five or ten grains of argent. nitras were commonly used efficaciously; sometimes the flowers of sulphur or other laxatives were given. In the cure of ulcers I conjoined local and general remedies, and in that of boils I at first applied poultices of powdered linseed; but they often increased the size of the boils, were inconvenient to make and consumed a large amount of muslin. I substituted, with advantage, the pure nitrate of silver before or after lancing. In the treatment of miasmatic fevers, I used saline purgatives, mercurials, the acetates of potash and ammonia; acidulous drinks, hot and cold water bathing, and the sulph. of quinine largely, in solution with the elixir of vitriol and white sugar. The complicated case above mentioned was the only one which terminated fatally. Although the yellow fever was at Havana twice, while our ship was in the harbour not a case of it occurred in her; I saw many, however, in the mercantile and great military hospitals in its vicinity, which had been brought there from the vessels and the different posts about the city. The former hospital is on the eastern part of the harbour; and near the suburb of Reglus is a private establishment, rented and kept by two Drs. Belot. The latter hospital consists of two distinct buildings, some distance apart; but only one of them was occupied when I was there. The cases of yellow fever seen were principally convalescent, and two had been attended with black vomit. One was that of a native boy, the other that of an Englishman, and one American had died of the fever the day before. Two

dollars a day were charged for each patient, and twenty dollars for every one buried. 1331 cases were treated last year, of which from 20 to 22 per cent. ended fatally; but in November 44 out of 202 died. One of the Drs. Belot stated to me that the yellow fever was infectious, atmospheric, and epidemic, but not contagious like smallpox; that it was always worse in the harbour among the shipping; he pointed out a vessel in which a number of cases had happened, two of which were fatal; but at the same time showed me an American ship, which had been in port for two months and a half, without having had a case on board.

The worst cases I saw were in the military hospital, which stands on the western side of the harbor, near the beach, between it and the new part of Havana. This hospital was built in 1842, is of marble from the Isle of Pines, about 300 feet wide and 600 long, two stories high, forms two large courts, filled with flowers, trees and plants, and in its arrangements, conveniences and attendance, was not excelled by any other hospital I have seen in any part of the world. The wards were well planned, all opened into the galleries encircling the courts; contained 800 patients, attended by twenty physicians, a half of whom were residents, and nursed chiefly by twenty-three sisters of charity. The wardrobe, dispensary, laboratory and kitchen were spacious and well furnished. The cooking was done in fine iron ranges, burning coal. Infected clothes were purified by fumigation from a furnace in a room appropriated for that purpose. Another one is converted into a chapel; a third one contains a library, mostly of French works, and some handsome anatomical preparations. Convalescents eat in a back portico, overlooking the harbor. The food is neatly cooked, and principally consists of rice, bread, soup, beef and chicken.

Sick and wounded seamen are in separate wards, and not mingled with the soldiers. All patients lie on iron bedsteads, with linen sacking bottoms, save a few on cots. Every bedstead is supplied with two sheets, one blanket and a pillow. Between every two beds was a close stool, behind a curtain, hanging from a semicircular rod of iron, fixed at its ends into the wall. Last year, during the prevalence of the yellow fever, the hospital contained 1,200 patients per day, of which number 250 were of the above fever. It was then necessary to use the verandas as wards, and they were so wide as to hold the beds crosswise, and yet to allow persons to pass between them and the courts. In a ward containing fifty-five beds, I saw a number of cases of yellow fever indiscriminately mixed with those of other complaints, and was assured by the resident physician who attended the ward that the fever was non-contagious, and very rarely infectious in the hospital. The cases were in the primary, middle and last stages. In the first stage there was headache, injected eyes, hot skin, frequent pulse; tongue moist, and covered with a thick, white fur, and red about the edges. Those in the middle stage were more severely affected, and more jaundiced; but in none did I find the pulse very full and strong. One patient pointed to a tub of water, and said he had just thrown up blood. Two

other soldiers, in the last stage, were most distressing objects. Their eyes and skin were of a saffron hue; their faces haggard and stupid; their mouths expanded; their tongues dry, brown and hard; one of them had hiccough; blood stained their lips; the pulse was small, weak, frequent; the skin cold and dry. The bed of one was deeply stained with dark blood, and this was sputtered also on the floor at the side of his bed, and that of another young, dying Spaniard. No painter could find two more horrible pictures of death to copy.

Treatment.—There was some difference in this at the private and public hospital. In the former, the first medicine given was the sulphate of magnesia, in doses large enough to purge, for several days. They were aided by cathartic enemata; cups and blisters were applied over the epigastrium, when nausea and pain in the stomach occurred. Cups were also applied to the nape of the neck for pain in the forehead, a striking symptom; blisters were sometimes placed upon the legs, and when black vomit supervened, Dr. Belot gave small doses of astringents—ratanhia, alum, and acetate of lead, with some opium. His patients were given for drink and nourishment, chicken-broth, rice and farina.

In the military hospital the primary treatment was likewise purging, with the sulphate of magnesia; but it was given in the dose of ʒj with gr. j of tart. emetic, and then followed by the administration of other internal remedies, chiefly astringents, of which the principal was the tinctura ferri chloridi, given agreeably to circumstances. Of the comparative success of the treatment at the two hospitals I was not informed accurately, but understood it was about the same.

The practice on board of American vessels, of giving calomel, jalap, and then castor oil, the above physicians condemned as injurious. Several hundred of their seamen died last year. One was deprived of her whole crew, and part of two others, in a fortnight, according to the statement of our consul; and yet the practice does not seem worse than that in the Spanish men-of-war at Havana, which the admiral of the port informed me, "lost at the above time 900 seamen out of 4,000, of the vomito," as the fever is there termed commonly, a mere symptom and effect being taken for the disease itself. Dr. Belot and other intelligent physicians regard the vomit as a mere mixture of blood, bile, and gastric juice. But although he thinks the fever non-contagious, there are many proofs to the contrary advanced by other eminent physicians; and we might concede, at least, that sometimes typhus fever might be conjoined with it, as it is believed it was at Pensacola and Warrington, in 1853, and caused it to spread from ship to shore, and then to spread from person to person at Fort Barancas and the Naval Hospital, among patients already there with other complaints, and likewise among the attendants.—*Am. Jour. Med. Sciences.*

Cases Illustrative of Criminal Abortion. By HORATIO R. STORER, M. D., of Boston. (Read before the Boston Society for Medical Observation, Feb. 7, 1859.)

CASE I. Mrs. H——, of Roxbury, applied to me for treatment, on the 14th of October last. Patient, an American by birth, though the wife of a German, is a well formed, healthy looking woman, some twenty years of age, and was then five and a half months gone with her first child. Her general health had been good, and till the present she had never suffered from any form of neuralgic pain.

She reported excessive toothache, of nearly two months' standing; that it commenced on the left of the lower maxilla, but then affected both sides of both jaws; that during the whole period she had been under the charge of a physician, and had been thoroughly and actively treated, by anodynes, local and general, by antispasmodics, purgatives, fomentations, counter-irritants; that a tooth, apparently the only carious one she had, had been extracted ten days previously, and that it had been proposed to remove others, to which, however, she would not consent—all without the slightest relief.

She alleged, and showed, loss of sleep and of appetite, great general prostration, excessive despondency of mind. After the extraction of the tooth, abortion had threatened—and she now begged that it might be brought on; declaring, if refused, that she would induce it upon herself, rather than endure further pain.

She was ordered a fragment of pellitory root, pyrethrum, as a direct gingival stimulant, though horseradish would probably have answered the purpose, and on the second day presented herself cured. There has been no return of the malady, save a slight attack on January 19th, which was readily relieved by the same treatment. Patient was confined on February 3d; and is doing well.

I report this case for two reasons. In the first place, as an instance of the frequent success of simple and apparently trivial remedies after severe ones had failed. The affection seems to have been entirely neuralgic in its character, reflex, the result of the uterine irritation. All other causes mentioned by writers as liable to produce it were absent; there was no local inflammation, no general catarrhal affection; the disorder did not commence at, and apparently was in no way dependent upon, the carious tooth, at least it was not relieved by its removal, nor by the local blood-letting then occasioned.

I am aware that sialagogues, according to Gardien, and he is apparently indorsed by Churchill, are supposed indicated only in those instances where the toothache is in consequence of a general catarrhal affection, which did not here exist; but on the other hand their use would seem, on the simplest theoretical grounds, among the first procedures that would occur to the mind.

The second of the reasons referred to is the following: that I may express my strong disapproval of the practice, still extensively obtaining among physicians and dentists, of subjecting patients to

the risk of miscarriage, which must be confessed excessive, by the extraction of teeth during pregnancy. This procedure should in no instance be resorted to till every other measure which affords any prospect of relief has been faithfully employed. In the history reported, it is seen that such was not the case.

Extraction has been recommended by authorities who are respected, by Campbell, Gardien, Capuron, and others, on the supposition that there is a greater likelihood of abortion from the continued pain; but against this argument I place the facts that after resisting many remedies, the pain often disappears spontaneously—as is indeed allowed by one of the writers instanced, Capuron—and that in more plausible measures, tried and untried, readily occurring upon reflection to all who do not blindly follow the books, there is, I think, a greater probability of success. Anæsthesia, local and general, have both been found to avail. I would suggest, as worthy attention, a modification of the process of subcutaneous injection, proposed by Alexander Wood, of Edinburgh, and so successfully employed; merely here introducing the opiate beneath the mucous membrane, which I am not aware to have yet been done.* Should this also fail, a direct topical application, either of a local anæsthetic or a gentle stimulant, might be made to the cervix uteri; but as this latter procedure, though at times successful in the obstinate vomiting of pregnancy, cannot be used with too much caution during gestation, it would, therefore, be seldom justifiable; and only in the cases where the extraction of teeth in pregnant women can ever be defended, those, namely, where abortion is actually threatening and apparently at hand.

It might be asked how the case now reported can fairly and with justice be considered as in any way illustrative of the subject of criminal abortion, because, though menaced and solicited, this did not actually take place. It is an acknowledged principle of jurisprudence that a person must be presumed to intend all the natural, probable, and usual consequences of his own act.† Whenever, by any operative or other procedure, a physician directly produces abortion, unintentional though this may be, if in the absence of any precaution that might have been taken, he must be considered, to the extent evidenced by the history of the patient, responsible therefor; and the class of cases to which that now reported belongs, is accordingly open to as legitimate a question of obstetric morality and of criminal responsibility as that other series of late so ably discussed by Dr. Churchill, of Dublin.‡

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* After this paper was in type, I find, by the Edinburgh Medical Journal for Nov., 1858, p. 424, that the above suggestion has been partially anticipated; a dentist, Dr Smith, having had recourse to the measure, for the painless extraction of teeth. The experiment does not yet seem to have been tried, however, as here proposed, with a view to prevent that operation.

† Davis, Crim. Justice, 483.

‡ Dublin Quarterly Journal of Med. Science, August and November, 1858.

Case II. I was called to attend Mrs. S——, of Plympton Court, on the afternoon of January 2d, 1859, and found her flowing profusely, this having continued for many hours; the attack at first being considered menorrhagic, as she was still suckling, till an abundant escape of coagula had rendered probable its true character.

Upon examination, the uterus proved somewhat enlarged and slightly retroverted, the os, with difficulty reachad, sufficiently patulous to admit the tip of a single finger, but its outline laterally and symmetrically fissured, so that the cervix presented to the touch an apparently deep and incised transverse wound completely through its substance, with irregular edges and indentations simulating artificial punctures These irregularities and depressions were not like those presented by malignant disease; there was no fetor or other usual or plausible symptom of such, save the hemorrhage. Within the os a mass was felt presenting, which, from the absence of other signs of polypus, the sudden and profuse sanguineous discharge, and the faint uterine contractions that from time to time occurred, conjoined as these were with a contained body of hardly sufficient size, if a polypus, to have itself excited them, I did not hesitate to pronounce a partially detached ovum.

My first impression from the physical examination was of course that the abortion must have been owing to direct instrumental or other violence, which, however, the patient persistingly denied. Upon learning that she was of the Catholic faith, these suspicions were somewhat allayed; for reasons I shall elsewhere fully set forth, and which are borne out by statistics so far as existing, and by general experience.

I was the further convinced of my error upon hearing the past history of the case. The patient, as already remarked, was nursing—sixteen months having elapsed since her last confinement. The catamenia had not returned, and the only possible cause she had had for supposing she might be pregnant, beyond the ordinary exposure of married women, was an apparent slight decrease in the amount of milk secreted; of the existence of this decrease, however, she was by no means certain, and had attributed to it no importance. She had strained herself within a day or two, by reaching to a shelf.

Mrs. S—— had been confined four times; in every instance labor being exceedingly tedious, and delivery accomplished by instrumental aid. Though the children were all born living—one, however, the first, dying shortly after birth—their extraction was effected with much difficulty, and application of considerable force. I could not doubt, therefore, that the laceration of the cervix had occurred at one or more of the times referred to, sufficient to account for all the appearances that were now observed; an accident by no means incompatible with the exercise on those occasions of all needful caution and skill, for it is notorious that lesions, to a greater or less extent, of the margin of the os are extremely common, even in natural labors.

In the treatment of the present case there was nothing unusual. It seemed impossible to check the abortive process, and there being

little danger from confined internal hemorrhage in early miscarriage, when the uterine cavity is but slightly enlarged or dilatable, the vagina was plugged; strips of cotton being used, inserted separately and tightly packed, like the foil in the process of tooth-filling. Upon their removal, three hours after, the os was found widely patulous, proper forceps were introduced, and an embrio, some six weeks advanced, was removed; upon which the hemorrhage at once entirely ceased. The patient has made a good recovery.

January 28th, four weeks subsequent to the miscarriage, the physical signs presented by the uterus were still persistent, as described above.

Upon reviewing this case, I think it important to dwell upon the diagnostic peculiarities it presents, unadverted to, so far as I am aware, by any obstetric writer. We are all familiar with the various permanently disastrous results at times following instrumental or otherwise difficult labor, the adhesions, bands, and fistulæ that not unfrequently come under medical observation; but to find such, in the absence of all signs of concomitant or consequent malignant disease, and accompanied by profuse hemorrhage—their edges, the cicatrices themselves, and the depressions between them, obscured and filled by coagula, and at the same time, and in the midst of these physical anomalies, the presentation of an aborting ovum—would raise, I may surely say, in almost every mind the suspicion of foul and criminal interference. Were death to occur under such circumstances, the result at an inquest could hardly be doubted, unless unusual care were observed at the autopsy to remove by ablution all clots obscuring the age of the existing lesions; a precaution that in most instances would hardly be observed, for fear of disturbing any attachments of the ovum—so often in these cases preserved for the cabinet—that might still remain.

It is my duty to lay the more stress upon this case and its several suggestions, lest at other times, and in another connection,* any remarks of my own might seem unjust. But, on the other hand, I am thus strengthened in my belief that many of the medico-legal relations of criminal abortion are as yet uninvestigated or unfound, and that with every step towards their elucidation an advance is made towards the ultimate suppression of the crime.—*Med. Jour. of Med. Sciences.*

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† Dr. Churchill on Consumption.—As the medical world is now all agog in discussing the value of the *Hypophosphites* as a remedy in Phthisis, it may be interesting to know what are the views of Dr. Churchill in relation to the medicine as a thereapeutic agent. Most persons have frequently heard *of* Dr. Churchill, though but few

* Essay on Criminal Abortion. North Am. Med.-Chir. Review, May, 1858.

† From *American Druggists' Circular*, Macrh, 1850.

have heard *from* him. The following letter, which we get from the *Tribune*, was addressed to Mr. J. Winchester, of this city:

PARIS, Dec. 17, 1858.

MY DEAR SIR:—* * * * I very much regret my utter inability to send you a copy of my work on Phthisis. The whole edition was sold off in less than six months, and it has now been out of print since February last. * * * * I am now engaged upon a second edition, which has been delayed with the hope of my being able to settle the question of the existence or non existence, in the human economy, of phosphorous in an oxydizable condition. The chemical proof of its existence in such a state I now confidently hope I shall shortly be able to lay before the profession and the chemical world.

Your reply to Mr. Guilford's claim of priority is perfectly to the point. The same pretension has been raised here by two different parties, and also by one or two in England; but, in reality, the use of phosphoric acid, in Phthisis, dates as far back as 1789, when it was employed in Germany by J. B. Lentin. Since then, the phosphates, especially the phosphate of lime, have been used by many practitioners, and among others by Dr. Stone of New Orleans. That all the cases in which they are stated to have proved beneficial are to be rejected, or attributed to error of diagnosis, I am not at all prepared to assert; but think they are to be accounted for in one of the two following ways:

Any mode of treatment which is combined with *rest* and *improved diet* and living, may prove beneficial by stopping or diminishing the amount of waste of the oxydizable phosphorous. The phosphates may, therefore, have *occasionally* appeared to be of use, just as may have change of climate, homœopathy, or anything else.

Phosphoric acid, as shown by Weigel and King, and later by Della Judda, frequently contains *phosphorus* acid, an oxydizable compound, and as such could have, in accordance with my hypothesis, a *curative* effect, owing to its very impurity.

My views, with regard to Phthisis, may be summed up in very few words, and are as follows:

Phthisis is a diathesis or general disease, depending upon the want or undue waste of the oxydizable phosphorus normally existing in the animal economy. Hence it follows that the remedy consists in supplying the deficient element by the administration of *any preparation* of phosphorus which is at once assimilable and oxydizable. Now, phosphorus itself possesses the latter quality, and has occasionally been used with success; but it has not the first, and is so dangerous a substance, that it has fallen into complete disuse. Phosphoric acid is assimilable but not oxydizable.

The *Hypophosphites* combine both qualities in the highest degree, being perfectly soluble, and nearly as oxydizable as phosphorus itself; for which latter reason I originally preferred them to the *phosphites* which are less so.

As to the cause of Consumption, my hypothesis leads also to one or two other consequences of the highest importance in practice, viz: Although the hypophosphites are the specific remedy of the

diathesis, they can not cure, by *their own direct action*, the local diseases which the diathesis may have produced in the lungs or elsewhere, previous to the employment of the remedy. To expect the contrary would be just as reasonable as to think the water thrown upon a burning building can do the work of the mason or the carpenter.

The repair of such local disorder is brought about by the special energy of the parts affected, and will take place in all cases in which the destruction of the parts involved has not gone beyond a certain *extent*. The *degree* of the disease I hold to be of less moment than the *extent*, and incline to go so far as to look upon Phthisis in the third stage as of a more favorable prognosis than in the second, *all other circumstances being equal*. The prognosis of each individual case will, therefore, depend upon two points—the extent of the existing lesion, and upon the presence or absence of complication.

Another consequence, which is, if possible, of still greater importance than the cure of the disease, is the following:

If consumption depends upon the waste of the oxydizable phosphorus, it follows that the hypophosphites not only have a remedial but a preservative power. In fact, *they are a complete prophylactic*. Such, I am confident, will prove to be the case; and the time will come, I hope, when Phthisis and Tuberculosis, instead of occupying the first place in the cause of mortality, will, like smallpox at the present day, form a comparatively insignificant item.

My reason for this confidence is not derived from my assurance of the correctness of my general theory, but from the *invariable efficacy* with which I have found them act in all incipient cases, even of the acute kind commonly called galloping consumption.

I am anxious that all these assertions should be verified by the medical profession throughout the world. With them, and them only does it rest to establish or to deny their validity. Unfortunately, the past history of our art shows that every discovery in thereapeutics has been met with a storm of prejudice and opposition such as finds no parallel except in the records of religious dissensions. I might have much to relate on that head in my own case, but prefer leaving such matters in the obscurity to which posterity is sure to consign them.

If, as you say, the people of the United States take an interest in my discovery, the only way in which I should wish them to show it would be by inducing the medical profession among you to give my treatment a *fair* and *complete* trial, which, I conceive, can only be done upon the following conditions:

1. That no case shall be considered to have any bearing at all upon the question at issue, unless it be expressly shown that all the conditions which I have laid down as necessary have been complied with.

2. That in each case not only the degree, but also the extent, of the tubercular deposit pre-existing to the treatment shall be recorded, together with the symptoms upon which this diagnosis is founded.

3. That the treatment used shall be the hypophosphites as I have

employed them. I do not consider myself in anywise responsible for the ill success of every crude formula which may be imagined by other practitioners.

As soon as my new edition is through the press, I shall have much pleasure in forwarding you a copy of it, meanwhile, I remain

Your very obedient servant,

J. F. CHURCHILL,
17 Boulevard de la Madelaine.

J. WINCHESTER, Esq.

PART THIRD.

BIBLIOGRAPHICAL NOTICES AND REVIEWS.

A Treatise on Human Physiology, designed for the use of Students and Practitioners of Medicine. By JNO. C. DALTON, Jr., M.D., Professor of Physiology and Microscopic Anatomy in the College of Physicians and Surgeons, New York; Member of the New York Academy of Medicine, etc., etc. With two hundred and fifty-four Illustrations. Philadelphia: Blanchard & Lea, 1859. pp. 608.

On the objects of the Author in this work, we have the following:

"This volume is offered to the medical profession of the United States as a text-book for students, and also as a means of communicating, in a condensed form, such new facts and ideas in Physiology as have marked the progress of the science within a recent period. Many of these topics are of great practical importance to the medical man, as influencing, in various ways, his views on pathology and therapeutics; and they are all of interest for the physician who desires to keep pace with the annual advance of his profession, as indicating the present position and extent of one of the most progressive of the departments of medicine."

He states that he has also given the experimental basis upon which the conclusions of physiologists are founded.

The illustrations have been got up mostly by the author. Of the

two hundred and fifty-four, only eleven have been borrowed from other writers.

Physiology appears to be progressive; and it seems necessary to have once in a while a new book for recording observations and discoveries. When the *vital force* was alone invoked in explanation of the processes going on in the body, a volume would last for a generation. But *tempora mutantur et nos mutamur in illis.* We have found out at last, that although we must recognize still the presence of this force, we can really explain by it nothing. We attribute to it very much—explain by it nothing.

Made up of some fifteen chemical, and eighty-five organic elements, the human body presents in the methods by which it appropriates substances to its purposes, and in the methods by which it discharges what is of no use to it, a series of movements, that we, in these latter days, have found amenable, to a very considerable extent, to the explanations of the chemist. *Physiological Chemistry,* therefore, has come to be recognized as a "department," and prolific, we find it to be, of the most valuable suggestions to practical medicine. The microscope unravels before our eyes the structure, minute as it may be, of the tissues; chemistry investigates the atomic elements in the normal and abnormal states; and when they are entirely "worn out," marks the modes by which they become compounded before being discharged from the body. As a consequence, works now on physiology have but little to say about "vital dynamics"—much about animal chemistry.

The diagrams by the author look refreshing, and show originality of thought and mechanical ingenuity. Considering how often the old diagrams have been reproduced, every new author compelling us to look upon the face of an antiquated acquaintance, we must give the author credit for, to say the least of it, administering to our taste for novelty. But this is not all. He has shown that we had not "culminated" on diagrams.

Of the many before us, we recognize, on page 349, one of spinal chord in vertical section, showing *reflex action.* The mechanical execution of this is very beautiful, and when the trouble of making *reflex action* understood is thought of, teachers will see the utility of this diagram.

We have no space, nor is it necessary, to pass in review matter that is the same in all works on physiology. We will notice, there-

fore, a few subjects that are yet in the "doctrinal" stage—unsettled. Among these we recognize *Animal Heat.*

The theory proposed by Lavoisier, and with some modification supported by Leibig, viz: that the oxygen taken into the lungs unites immediately with the carbon of venous blood, thus giving rise to carbonic acid at once set free under that form to the atmosphere, the same quantity of heat resulting from the process as would have been produced by the oxydation of a similar quantity of carbon in wood or coal, is really in the estimation of the author not tenable. It being ascertained that the carbonic acid is not formed in the lungs, but exists in the blood before its arrival in the pulmonary capillaries, and that the oxygen of inspired air, does not combine with carbon in the lungs, but is absorbed by the blood globules and carried away by the current of the general circulation, Leibig proposed to have the oxidation in the capillaries of the tissues and organs in the various parts of the body.

In the following, the author has condensed in a very chaste manner, his views on the subject:

"Animal heat, then, is a phenomenon which results from the simultaneous activity of many different processes taking place in many different organs, and dependent, undoubtedly, on different chemical changes in each one. The introduction of oxygen and the exhalation of carbonic acid have no direct communication with each other, but are only the beginning and end of a long series of continuous changes, in which all the tissues of the body successively take a part. Their relation is precisely that which exists between the food introduced through the stomach and the urinary ingredients eliminated by the kidneys. The tissues require for their nutrition a constant supply of solid and liquid food, which is introduced through the stomach, and of oxygen, which is introduced through the lungs. The disintegration and decomposition of the tissues give rise, on the one hand, to urea, uric acid, which are discharged with the urine, and to carbonic acid which is exhaled by the lungs. But the oxygen is not directly converted into carbonica acid, any more than the food is directly converted into urea and the urates.

"Animal heat is not to be regarded, therefore, as a combustive process. There is no reason for believing that the greater part of the food is '*burned*' in the circulation."

As is usual with works of the kind before us, the question of 'spontaneous generation" of infusorial animalcules is descussed.

The experiment of Schultze, by which atmosphere, in getting into the bottle containing the infusion of organic matter was made to pass through sulphuric acid and a solution of caustic potash, the author thinks settles the matter against spontaneous generation, and in favor of the presence of germs. These germs, it is supposed, are supplied by the atmosphere. Being microscopic, they, of course, escape ordinary observation.

We see no reason why this question should have excited so much interest. It is, after all, a mere question of method. For all that we can see, the power to get up natural laws, the operation of which results in the formation of animals, differs in no respect from that of direct creation. Nor do we suppose that one view more than the other, would be calculated to enhance the veneration with which all sensible men contemplate the Architect of the Universe.

Among the things that may be regarded as "differential" on the part of the author are his views with reference to *red blood corpuscles.*

"In structure, the blood corpuscles are homogeneous. They have sometimes been erroneously described as consisting of a closed vesicle or cell wall, containing in its cavity some fluid or semi-fluid substance of a different character from that composing the wall of the vesicle itself. No such structure, however, is really to be seen in them. Each blood globule consists of a mass of organized animal substance perfectly or nearly homogeneous in appearance, and of the same color, composition and consistency throughout. In some of the lower animals, (birds, reptiles, fish,) it contains also a granular nucleus imbedded in the substance of the globule; but in no instance is there any distinction to be made out between an external cell wall and an internal cavity."

We know of no mode by which this question, "cavity or no cavity" of red-blood corpuscles can be settled. The weight of testimony is against the author. Besides we regard his explanation of what has been regarded as a veritable endosmoses as unsatisfactory. Water added to blood swells up the corpuscles so much that they become spherical and burst. So will any of the animal fluids possessing less density than blood.

There is an omission in this work of anything in relation to the physiology of the *special* senses. This detracts from the value of the work, very materially, to students. Nothing can be more interesting to the student than the eye and ear, and as the pathology of these organs are now exciting a great deal of attention, the

physiology as a basis for this is indispensible. We hope the author, as soon as a new edition of this work is called for will supply, what we can regard in no less light, than an omission.

As it regards the style of the author, we may remark there can be but one opinion. It is a good while since we have had the pleasure of inspecting one of an American author, so pure. The best of words are used in the descriptions and seldom one that is redundant. As a consequence we have terseness and perspicuity. Nor can any one be at a loss to understand the position of the author on subjects admitting of diversity of opinions.

In conclusion, we bespeak for this work a perusal by our readers, and we predict for it a number-one position among works of the kind.

An Essay on the Pathology and Therapeutics of Scarlet Fever.—By CASPAR MORRIS, M. D., Fellow of the College of Physicians of Philadelphia, late Lecturer in the practice of Medicine in the Philadelphia Medical Institute. Philadelphia: Lindsay & Blakiston, 1858.

This monograph has been on our table for some time. The original edition having become exhausted, the publishers have requested liberty to issue a second. The author tells us that the views expressed are the result of thirty years' observation in various public institutions and private practice. We copy the following on the period of life and age most subject to the disease:

"Though it be true that scarlet fever is in an especial degree a disease of infancy and childhood, all ages are, to a certain extent, liable to it. I some years since attended the family of an officer of the highest rank in the U. S. Navy, in which every member was ill simultaneously with the most malignant form of the disease, including his wife who was then fifty years old, and died of the disease, a son who was more than twenty-five years old, the servants and nurses, all of course beyond childhood. Parents and nurses often take the disease from children. The reports of the Registrar General of Great Britain are exceedingly interesting from the extensive field of observation they cover, and furnish us with the most important information on this and similar points. Thus, with regard to that which now claims our notice, we find that during the months of January and February, 1840, there were 345 deaths from the disease

in London. Of this number 326 were under thirteen years of age, and 19 only were adults. And of 2614 deaths included in his fourth report for the kingdom, 2429 were children, 182 adults, and 13 aged persons. Of 21,304 deaths by scarlet fever in England and Wales, there were under 1 year, 1291; 1 year old, 3102; 2 years, 3705; 3 years, 3386; 4 years, 2677; from 5 to 10, 5400; 10 to 15, 1056; 15 to 20, 268; 20 to 30, 228; 30 to 40, 130; 40 to 50, 56; thus proving that the period of greatest susceptibility is from 5 to 10 years.* This proportion is even greater than appears on the face of the table, since we must take into our calculation the consideration of the large number of children who have died of other diseases before they reached the fifth year. Infants under one year are less liable than those who are older, as is proven by the statement just presented. Now, when we take into view the commonly conceded fact that the proportionate mortality of adults is much greater than of children, the real difference in liability will be found to exceed that which appears to be represented by these numbers, great as this is. This able and interesting digest of the mortality of Philadelphia prepared by Dr. Wilson Jewell, exhibits a similar result. That for instance for second quarter of 1857, exhibits as the total mortality from scarlet fever 153 cases, of which one only was an adult between 40 and 50 years old; 1 between 15 and 20; 36 between 5 and 10; 66 between 2 and 5; 31 between 1 and 2; and 11 only under 1 year. As regards sex, there were 72 males and 81 females. Since the publicatton of the first edition, I have met with an interesting case of a lady with an infant two months old. She had a severe attack of anginose scarlet fever, with great cerebral disturbance. The disease was fully developed when I was first called to the case. The secretion of milk was very abundant, and unchecked by the disease. The infant had been exposed equally with the mother to the cause of the disease, and also to the contagion of the mother, having been nursed during the night, and was laid in the crib by her side. The danger to it could not therefore be increased, while the influence upon the mother of the interruption of lactation would be very pernicious. I therefore directed that the child should be kept at the breast, which was done with entire impunity. The secretion of milk was never suspended, and the mother recovered. The infant escaped then, but had scarlet fever some years subsequently. That persons at the other extreme of life may suffer from it I know, having seen it prove fatal in several patients not less than fifty years old."

*See Dr. Tripe, in London Medico-Chirurgical Review.

The following relates to a matter very frequently disussed by medical men :

"Before we dismiss finally the consideration of the nature and laws of the specific cause of the disease, it is proper to draw attention to the well established fact, that it is one of those to which we are liable but once. Dr. Willan, whose opportunities for observation, were unusually great, and whose authority is beyond question, says that in more than two thousand cases which passed under his notice, he never met with a second attack. Dr. Tweedie asserts that there are well authenticated instances, but does not speak of them as of his own knowledge. No instance of a second attack occurred to Dr. Chapman, in his large and long extended observation. Dr. Currie, of Liverpool was compelled by long experience to 'renounce the opinion he had early entertained, and to confess that the same individual is liable to the disease once only.' Sir Gilbert Blane, on the other hand, asserts that he met with one instance of scarlet fever occurring thrice 'without the least suspicion of ambiguity.' Analogy favours the idea that in this, as in all other diseases, there are such exceptional cases. At an early period of my professional course, I thought I had met with them frequently myself. Longer and more careful observation has convinced me that, in many instances, I had mistaken other diseases for scarlet fever, misled by the similarity of the eruptions. There is a form of eruptive fever caused by indigestion, closely resembling this disease in its appearance, and like it making its invasion very suddenly, which is often met with in childhood. Such cases have undoubtedly been mistaken for scarlet fever, and have given rise to some of the reputed instances of second and third attacks. When occurring in the case of a child with enlarged tonsils, which are liable to acute inflammation from cold, or disordered stomach, the resemblance to scarlet fever is very close. Such cases run a shorter course, are not attended by delirium, nor is there the free secretion of acrid mucus discharging from the nares. The pulse is not so frequent, nor is the prostration so great. They are not followed by desquamation or anasarca.

"Secondary attacks may, however, occur, though less frequently in this than some of the other exanthematous fevers. A medical friend of great eminence has informed me that he lost a member of his own family by a second attack. The first was, when the child was but four years old, was irregular in its character, the eruption imperfect, and not followed by desquamation. There was an abscess

in the neck, and long continued ill-health succeeded. After an interval of five years, the second and fatal attack supervened. There was but little affection of the throat, but the rash was very vivid and extensive, and death occurred from exhaustion of the vital forces by the intensity of the febrile reaction. The absence of desquamation after the first, and the occurrence of the second, induce me to believe that the first was of the same nature as those above referred to. Another medical friend has assured me that a well-marked second attack occurred in his family."

A treatise on the Venereal Diseases. By JOHN HUNTER, F. R. S., with copious additions by PHILIP RICORD, translated and edited with notes, by FREEMAN J. BUMSTEAD, M. D., second edition, revised, containing a resume of RICORD'S recent lectures on Chancre, &c. Philadelphia: Blanchard & Lea.

The doctrines of Hunter and Ricord on the subject of venereal disease, are well known to our readers. The original works of these great men have been so long before the profession, that they are already familiar as household words. We feel warranted in saying that very few books, in the history of surgical literature, have had such deeply laid and solid foundations, in the personal observations and clinical experience of their authorship, as the one before us. The best labors of the great modern surgeon, John Hunter, were bestowed upon this subject. His observations, as recorded in this book, constitute the great substratum on which the various doctrines connected with venereal disease, as understood in modern times, best. These, corrected, extended and perfected, by various modern observers, find their culmination in the zeal, perseverance, exclusive devotion, acumen, and extended means of observation, of Ricord. The combined observations of the two, blended in a single volume of 550 pages, octavo, constitute the alpha and omega of this subject, as belonging to modern times, and a monument to their memory, which, of itself, is sufficient to render their names imperishable.

The additions made by the editor are slight, but creditable as to character. Such of our readers as are ambitious of having anything approaching a good library will not fail to secure it.

H.

A Practical Treatise on Diseases of Children. By D. FRANCIS CONDIE, M. D., Fellow of the College of Physicians, &c. Fifth edition, revised and enlarged. Philadelphia: Blanchard & Lee.

This treatise has so long been in the hands of American practitioners, and is so generally recognized as a standard work, that any thing beyond the mention of the present edition, is superfluous. The well known reputation of the author, and the former editions of the book, are a sufficient guaranty as to the character of the additions. We suppose that there are but few who assume the difficulties and encounter the embarrassments and uncertainties of infantile practice, without seeking aid from its pages. H.

PART FOURTH.

EDITORIAL AND MISCELLANEOUS.

The Prevalence of Insanity.

We notice by the Reports of our Asylums for the Insane that, although we have attempted to make provisions for this unfortunate class of our population, this is yet by no means ample. In Massachusetts, where the census of the insane and idiotic has been taken with some care, it seems that, in 1854, there was one in every 437 of the population. This proportion is greater than we find in most other countries. In France, it is one in every 795; in Norway, one in every 551; In the Rhenish Provinces, one in 666; England and Wales, one idiot or insane in 577; in Scotland, in 1851, one in 390.

We have no means of comparing the present extent of insanity with its prevalence among the same races for any length of past time. Indeed the duty, it seems, has just been assumed of collecting statistics. It would be very desirable to know the extent of the disease among the ancient Egyptians, Greeks and Romans; or what it is now in China, Arabia or India. Nor have we any means of getting at the proportion of those who lose their reason among the barbarous and demi-civilized.

Of one thing, however, we may be very certain. We have a very large amount of the trouble in our country, and the annual reports of Superintendents indicate that it increases, *pari passu*, as we develope our type of civilization. If one in every 427 of our population are inevitably doomed to lunacy, as appears to be the case in Massachusetts, the suggestions, it might be supposed, of humanity, if properly consulted, would point out the propriety of thoroughly investigating everything in regard to our institutions, habits, etc., that might be suspected of having the relation of cause to the complaint.

The cause of the disease we are aware, is a very broad field, and one that has been industriously cultivated. We shall, therefore, only trouble the reader with a very few thoughts on the present method of educating children, in order to see if the nervous system is properly cared for at the period when it is most easily injured.

At a very early age our children are sent to school; and it is very common for parents to commit them entirely to the care of the teachers, not inquiring at all into the amount or character of the matter they are required to learn. They are taken charge of, and among the first lessons they receive is one addressed to their ambition, and designed to call forth the utmost stretch of the intellectual faculties; and such lessons are repeated, and daily attainments on the part of the child required at the peril of being "dismissed," "degraded" or "disgraced." The exercises, too, are carried on under very unfavorable circumstances. The period of daily confinement varies but little from six hours; and it should be recollected that the rules of the school-room are designed to repress all physical or spontaneous motions during school hours; and that the lungs have to be filled with an impure atmosphere during six out of the twenty-four hours.

Is a system of education such as this, founded upon correct views of physiology? Is it proper, by either hopes or fears, to goad the brain of the child into such artificial activity, continued, too, for such a length of time? Neither Pope, Sir Walter Scott, nor Locke, could labor when in the best health, more than five or six hours daily. If, therefore, men with brains fully developed and hardened by constant exercise, are unable to exceed six hours' daily toil, what propriety is there in forcing children to apply themselves for such a period, or longer?

The impression has had currency for some time, that such a course often begets distaste in after life for intellectual pursuits; and we have abundant evidence that it is inimical to the free energy and

strength of the original thinker. Moreover, is it not very probable, that we may look into our school system with great confidence for the causes of the alarming prevalence among us of insanity? May we not here detect the early rupturing of these delicate brain cells, and sundering of those highly attenuated nerve fibres, which predispose in after life, from the slight presence of exciting causes, to mental aberration?

There is not much known in regard to the frequency of insanity among nations that are uncultivated. Travelers tell us that there is but little of the disease on the southern shores of the Mediterranean, as in Egypt and Syria; and still less common is it in Arabia, and in the parts of Africa known as Negroland. Such facts lend reasonableness to the presumption that the disease is connected intimately with our system of mental culture.

We have, as we have intimated, an ignoring of not only the plainest principles of hygeine, in even the best conducted schools, but the child treated without reference to those physical laws upon which its health in future life depends. It is confined at intellectual pursuits for a greater period daily than can be endured by an adult.

Parents and teachers should look into this matter, for we have no doubt, that sooner or later, here will be recognised a very fertile source of mental disease.

The remark is often made, that moral causes, more frequently than physical, determine insanity. This is the opinion, after very extensive statistical inquiry, of Parchappe; and much of our insanity is accounted for by the variety and intensity of the moral emotions incident to our form of sociology. This makes it necessary to watch over the amount of labor to which the nervous system is subjected in early life; and all other circumstances calculated to interfere, in any way, with its integrity. For any thing that is known to the contrary, the *moral*, just as well as the intellectual faculties, have their seat in the brain. What, therefore, destroys a cell or fibre with which intellectual phenomena are connected, may also be expected to affect, in some injurious manner, the moral faculties.

Chicago Medical Journal and Ethnology.—Drs. Davis and Byford have retired from the editorial charge of this excellent journal. The name of Dr. Brainard, Professor of Surgery in Rush

Medical College, now appears on the cover as editor. To the present editor therefore we extend the right hand of fellowship, and wish for him a full share of all the rewards the future is likely to contain for medical editors.

We are not in the habit of calling in question the views of our confrerés. But Dr. B., in his notice of Flouren's course of Comparative Physiology, given at the Museum of Natural History, Paris, 1856, makes some ethnological statements, in regard to which we propose to ask a question or two.

The unity of origin of the races of mankind, Dr. B. says, Flouren's has completely established. It, as we understand, is claimed as an inference from the following propositions:

1. "What is the characteristic of each species of animal? It is the *power of perpetual reproduction.*

2. "There is no evidence that any species of animal has ever changed its essential characters of form or habit. While the individuals and the elements of each are always changing, the form is perpetual. M. Flourens asserts, and no one is more competent to decide, that from the earliest historic period to the present, there is no evidence that a single species of animal has ever changed its essential characteristic."

3. "It is the character of hybrids or mongrels to become extinct at the fourth generation."

How does the above definition of "species" favor the doctrine of unity of origin of the races? If all the races are of the same species, what is the reason that the Caucasian and Negro have not the power to mix and produce a permanent offspring—an offspring capable of perpetual reproduction?

Again, if it is true that the essential characters of animals never change, would not this favor the theory of *diversity of origin?* Indeed this is the principal of all the arguments the diversitarians use. If it is true that the negro has not been made a negro by climate, habits, food, or any thing else with which we are acquainted; the plain inference to which the mind of every one arrives, is, that he was created a negro. If time has had no effect, within the historic period, on the physical characters of the different races, is it not right to infer that these characters have always been what they now are?

MEDICAL NEWS, LOUISVILLE, KY.—Certainly we "Exchange," certainly we will, and glad of the opportunity. We like Louisville too well, to even appear tardy in reciprocities. We had supposed, until we looked, that the "Medical News" was on our exchange list. Well, it is *now;* and we embrace the opportunity of wishing for it a wide circulation. The numbers we have received are filled with good matter, well dished up.

AMERICAN MEDICAL ASSOCIATION—CONVENTION OF COLLEGE PROFESSORS AT LOUISVILLE, KY.—Before this number reaches our most distant subscribers, we will have another national *re-union* of medical men at Louisville, Ky.

The great and leading object of these meetings being to elevate the standard of medical education—to make medical men more learned and thorough, we have been amused with the opinions expressed by the journals on the practicability of the measure. As a rule, those journals closely connected with the colleges, have rather been inclined all the time to pour cold water on the efforts of the Association. They think the colleges, and not the profession, have rightly in charge the subject of medical education. They, the colleges, it is suggested, have been chartered and endowed for that very purpose. They know all about the subject, and from year to year introduce all the improvements practicable. On the other hand, the journals having no such connection, are clamorous that the Association take charge of the whole subject of medical education, prescribing not only the rules and regulations by which degrees shall be conferred, but taking away entirely from colleges, the right to confer them, placing this power in an independent board got up for the purpose.

Last year the committee on "Medical Education" offered a resolution providing for a convention of college professors, to meet at Louisville, on Monday, 2d of May, to take the whole matter into consideration. Of what account one day's work will be on such a subject, we are unable to see.

We are not authorized to speak for, either the colleges, of which there are now about 42, or for the laymen who operate mostly

through the Association. But we can see no impropriety in regarding all parties as aiming at the same thing. Every one, indeed, who has the feelings of a medical man, wishes and desires to see our system of education perfected. And while the colleges, we would suppose, would be willing to receive useful suggestions from any quarter whatever, they will likely be for claiming, as long as they have the interesting responsibility imposed upon them of keeping life in their respective enterprises, some little independence of judgment. It is reasonable that they should be a little *indisposed* to having no hand whatever in the process of hatching their own chickens.

Death of Prof. Ackley.—We are pained to have to announce the death of this distinguished surgeon, which took place on the 24th ult., at his residence in Cleveland. He was in the fiftieth year of his age.

Prof. A. was a self-made man. At an early period of his professional career, he made himself a fine anatomist, which led him into the department of surgery. He filled the chair of surgery for a number of years in Cleveland Medical College. As a surgeon, he was distinguished for the strength of his judgment, and the facility and success with which he operated.

This is another lesson, seemingly near at home, reminding us of the unerring certainty of the old maxim—*mors omnibus communis.*

Museum of Starling Medical College.—The room of the building designed for museum purposes is now completely finished, and is being rapidly filled up with material pertaining to medicine and the natural sciences. In addition to what we have had on hand for some time in the way of facilities for illustration, orders have been sent to Europe for more, embracing chemical apparatus, paintings, and models, with which to illustrate all the departments. Besides, the order embraces a pretty large number of osteological preparations, not only pertaining to the human body but to all the principal types of vertebrated animals.

Before, therefore, our winter session opens we hope to be able to present a museum containing as useful a collection of things as can be found in the country anywhere—a collection upon which the physician, no less than the student will delight to look.

By the way, we might, just as well as not, mention the fact, that our college building, which in some parts, heretofore presented an unfinished appearance, is rapidly approaching completion. The workmen will have every part in complete order by the 1st of July.

To the alumni and friends of the Institution, what we have said will no doubt be regarded as good news.

A tribe of aborigines have, it is said, lately been found in Australia presenting the peculiarity of being without hair on any part of their bodies at any period of life.

To Subscribers.—One more number closes the 11th volume of the Journal. Very many are in arrears, not only for the present volume but for back volumes. We hope therefore to have a general "*hearing-from*" time with all who owe us anything, before our next number goes to press.

Receipts will appear in July No.

Agents wanted.—Will each subscriber who has been owing us for years, turn himself at once into an agent, collect of himself what is coming to us and transmit it to our address in this city? We want a number of agents if our terms suit.

Surgical Cases, *illustrative of points connected with injury of nervous trunks.*

The first two we give as illustrating the tenacity with which vitality is retained by nervous trunks.

Case 1. Miss M. appeared at the surgical clinic of Starling Medical College on Saturday, Feb. 6, 1859, for the removal of a tumor, situated on the humerus, extending from the lower margin of the

principal types of vertebrated animals.

tendon of the pectoralis major, to the flexure of the fore-arm, and encircling more than two-thirds of the circumference of the arm. As she did not arrive till we had made engagements with other cases which claimed the clinic hours, all interference was deferred, and an engagement made to remove the mass at the clinic for Saturday, Feb. 13. At this time the class was informed that we supposed that we had to do with a fatty tumor. A wide depression was formed on the mass by the forcible contraction of the biceps, showing conclusively that it was beneath that muscle. Attention was fixed upon the evident relation of the disease to the whole length of the humeral artery, and the median and other nerves.

Operation. We made an incision upon the inner margin of the biceps: having thus exposed it freely we proposed to bisect it, or not, as seemed to be demanded by circumstances. It was, however, unnecessary. The arm being flexed, its inner, inferior and outer margins were separated with great facility, with but little aid from the knife. At its superior margin, however, its connections being very powerful, were separated only by the knife. Observing carefully the course of the large blood vessels and nerves, all these, except the median and internal cutaneous nerves, were found to pass beneath the tumor. These entered it above, and the former was already recognized as emerging from it below. To effect the separation of them was the only nice point in the operation. It was readily and perfectly effected, so far as the median was concerned, but as we advanced downward in the separation of the internal centaneous, we mistook it for a fold of cellular tissue, and accordingly a section, a little more than an inch in length, was removed. The operation being completed, the whole chasm was traversed by the median, as cleanly dissected as we were capable of doing it, which was even considerably removed from even the nearest wall of the chasm which it traversed. Hemorrhage being arrested, these were carefully approximated, by adhesive strips, compress, bandage, &c., and the patient carefully put to bed, without a pulse in the radial artery, however.

Feb. 14th. Arm still pulseless—temperature much reduced.

15th. Still there is no pulsation at the wrist, or at any point below the tumor. No cause for it, in the character of the dressings; nor has there been at any time.

16th. There is barely perceptible pulsation in the radial: increase of temperature quite obvious.

17th. Normal temperature of arm restored—pulse gaining some strength and volume.

From this time there was gradual improvement. There was some complaint of numbness in the integument, covering the ulnar border of the fore-arm, and occasional "tingles" along the course of the median, but neither was serious in character. The wound healed satisfactorily.

We heard from this patient eight weeks after the operation, and were gratified to learn that sensation and motion were already quite perfectly restored in all the parts supplied by the median.

Case 2. We assumed the care of Mrs. L., of Prairie township, Franklin county, Dec. 12, 1857. She is the mother of a large family, is aged 62, but presents the characteristics appropriate to 75. Has had small but persistent ulcers on the right leg, for the greater part of the last fifteen years. They have not troubled her for several months.

At our first visit, we found a deep excavation, formed, as we supposed, by the sloughing of a carbuncle, large enough to admit a large fist, situated so as to expose four inches of the sciatic nerve as it emerges from the pelvis, and the parts attached to the tuberosity of the ischium. From this excavation, a sinus passed down the thigh along the course of the biceps muscle, and had an opening through the integuments, on the tenden of the biceps, opposite the middle of the popliteal space. Another sinus extended upwards from the large excavation, crossed the posterior aspect of the sacrum, passed into the gluteal mass of the opposite side, and became subcutaneous, just below the crest of the illeum.

To us, a most important feature of the case was in the mode of implication of the sciatic. It did not pass through the chasm without touching the walls, but was in contact with its deeper one, being dissected out in its other aspects as perfectly as could possibly be done by the scalpel. Still sensation and motion, so far as they were dependent upon the nerve, were not perceptibly impaired.

The surface of the sore presented a singular absence of sloughs, granulations and sensibility.

For four weeks, no means were found successful in effecting a perceptible alteration in its character, so that during the whole of that time, two-thirds of the circumference of this large nervous trunk was only protected by the imperfect pus that exuded from the surface, and our dressings. A most rigorous use of general stimulants and tonics, with the local use of pressure, effected by adhesive

straps, the bandage, compress, &c., succeeded, eventually, in studding the surface with a crop of fair granulations. These could only be sustained by the vigorous and varied use of the same local and general appliances. The undue continuation of any given stimulant or tonic, or combination of stimulants or tonics, was followed with a weak condition of the surface, most promptly and certainly. Domestic beer, ale, hard cider, wine, rye whisky, brandy, the mineral acids, quinine, chalybeates, and bitter tonics were brought into requisition. When vigorously used, and frequently varied in their combinations, they imparted laudable characters to the pus, and color and sensibility to the granulations, with the utmost certainty. But the absence of a distinct impression from them upon the general system, was followed with almost unfailing certainty by suspended action. Such a course of perseverance as we have rarely been called upon to exercise, was finally successful in closing the sinuses, and filling and cicatrizing the open ulcer.

The patient has recovered. Of course so extensive a gluing together of important parts as is implied in the closure of so extensive a sore, is attended with some inconvenience to motion. So far as we are able to ascertain, however, we are of the opinion that the nerve has sustained no injury except what results from the contraction of the cicatrix, and this is moderate.

In the first of these cases, we have 7 or 8 inches of a large nervous trunk deprived of its connection with the vascular system, except so far as it is effected through the vasa nervorum, maintaining its vitality, till by the deposition of lymph, and the formation of new vessels, it is supplied by them. In the second case we have a large nervous trunk laid bare in about two thirds of its circumference, for four inches, and kept in that condition for a number of weeks, retaining its vitality, however, and eventually recovering its function perfectly.

Case III. An Irish dining-room servant, in an encounter with a fellow servant, received a punctured wound in the flexor muscles of the fore-arm, with a broad dull carving knife, which evidently injured, though it did not divide the median nerve. Appeared at the surgical clinic of Starling Medical College, on Saturday, Jan. 31. Complained of some numbness and tingling in the situation of the distribution of its trunk. The wound was treated as an incised wound, and very soon closed.

Case IV. A man entered the Ohio Penitentiary about the first

of January last, who had recently suffered from a sloughy abscess on the lower part of the radial side of the fore-arm, the cicatrix left by which was dense and very much puckered. It was attended with slight impairment of both motion and sensation, with tinglings from slight causes. He soon afterwards was presented at the hospital clinic.

The interesting practical fact in these cases, is, that in both of them, the ordinary use of the hands, in the first case in the trifling work of a dining-room, and in the last, an irregular, but trifling service, was sufficient to produce vesication, not of the hand generally, but on parts of it indicated by the points of distribution of the branches of the median nerve, in the first case, and of the radial in the second. The vesications in the latter case were disposed on the thumb, the radial border of the index finger, and the adjoining borders of the index and middle fingers, with all the particularity of an anatomical description.

These trifling cases are abundantly instructive. The nervous influence being impaired, parts so situated, have diminished power to resist and prevent morbid results, from the application of external injury. The same thing is occasionally exemplified in paralysis. Applying a blister to a paralyzed part, quite probably it does not produce simple vesication, but sloughing. A patient with hemiplegia becomes bed-ridden. The dorsal decubitus, with equal pressure on the two symmetrical halves of the body, is maintained. On the sound side no injury results; on the injured side, there are extensive sloughs. Injury of the spinal cord, in certain situations, produce paralysis, or impairment of nervous supply to the bladder. It eventually becomes inflamed. Ligation of the axillary plexus in animals, or exsection of portions of important nerves in man, is not unfrequently attended with inflammation and mortification of the parts beyond. Division of the fifth nerve about the ponsvarolii of rabbits, is followed by a superficial inflammation of the eye, and opacity of the upper segment of the cornea. Division of the nerve on the petrous portion of the temporal bone, so as to destroy the casserian ganglion, is followed by general ophthalmitis, sloughing of the cornea, and destruction of the organ.

H.

Case of Purpura Hemorrhagica. By THADDEUS ASBURY REAMY, M.D., Hopewell, O. Read before the Hebron Medical Society.

Jasper Shaw, aged seven years, was brought to my office by his father, on the morning of 16th of March last. I was requested to prescribe for "a sore mouth and bleeding gums," from which, I was informed, he had been suffering for several days. On examination, found entire mucous membrane of mouth and gums of very pale color, and small quantities of blood oozing out around the teeth. Pulse very frequent and feeble, having scarcely any force; countenance pale.

I inquired if there were any spots on his legs; was assured there were none. I remarked to the father, that in this he was probably mistaken, which opinion proved correct. Exposing the parts revealed two or three large, dark, echymosed spots on each of the lower extremities, situate on the anterior aspect, about midway between knee and ankle. Petechia in great abundance on both upper and lower extremities. There had been no epistaxis. I informed the father, however, that this latter difficulty would, in all probability, be added soon.

The lad had bright, penetrating, blue eyes, light hair, rather delicate physical organization; stood very erect, moved quickly, and answered questions very intelligently.

The father stated that the boy had never in his life been sick; had always been remarkable for his activity. Intellectually, as compared with his brothers, (of whom he had several), was decidedly in advance of his years. I recognized the case as one of Purpura. This was clear. But the causes producing it, a knowledge of which was of paramount importance, to a knowledge of the disease itself, in guiding to a correct course of treatment, was by no means so plain.

It could not be for want of wholesome, nourishing diet; for the father was a farmer, who lived well, and their food was of the most completely mixed character, such as would be considered, so far as the influence of diet would affect, to protect against such an attack. It could not be bad air, peculiar to their immediate location; for theirs is a very healthy country residence; and the little fellow was much accustomed to active out-door exercise. It could not be bad water, for there was a spring of very pure water near the door of their dwelling. Neither could there be hereditary taint; the parents were both quite healthy, and no such disease had ever affected any of the relatives.

In reflecting as to the etiology of this case, I was forcibly impressed with the similarity of symptoms, and constitutional resemblances between it and the more grave cases of diphtheritis, that occurred during the epidemic of this latter disease, that prevailed in this vicinity during last year, an account of which was presented to this society at its last session, and published in the Ohio Medical & Surgical Journal for January, '59. Indeed, with the exception of the pellicular membrane, and the difficulty in breathing, dependent upon the obstruction of the air passages, the symptoms were almost identical. And I now remembered to have seen a fatal case of Purpura, two years since, occurring in a young man of constitutional temperament, very similar to this boy. Every case of diphtheritis that proved fatal, in my own practice, occurred in children of delicate, nervous temperament. And I am well convinced, that in the cases that recovered, other things being equal, the disease was uniformly more grave when the subject was of this type.

My conclusions were, that the two diseases were superinduced by the same cause. Perhaps, some peculiar atmospheric condition, acting upon constitutions already prepared by their delicate organization, for the destructive influence of the morbific agent, producing disorganization of the blood, &c.

Holding these opinions, I made the following prescription: Quin. Sulph.—grij every four hours, lemon juice to be used freely. Tr. myrrh applied to the bleeding gums.

On the following day, at 4 o'clock, p. m., was summoned in great haste to see my patient. Had been bleeding from both nostrils some five hours. Pulse very frequent and feeble, countenance pale; patechia had extended to the trunk in great abundance; echymosis darker; gums in somewhat better condition, no bleeding from them. Testing the urine, I found it to be excessively alkaline.

Pres. quin. sulph. gr. V, every 4 hours, acid nitric gtt. V, largely diluted in water, four times daily. Passed cotton rolled in tanic acid, up each nostril, which arrested the hemorrhage.

Third day—Hemorrhage commenced three hours prior to my visit; blood very pale. Pulse almost imperceptible. Countenance anxious. Has lost quite an amount of blood. One of the most prominent indications, to arrest immediately the epistaxis.

Injected into the nostrils dr. ij comp. tinc. benzoin. In 15 minutes hemorrhage ceased. Internal pres. as before.

Fourth day—Has been no bleeding. Both nostrils completely

filled with coagula. Pulse not quite so frequent; some more force. Pres. continued.

Fifth day—Nostrils still nicely plugged; pulse as yesterday; ordered small quantities of brandy; reduced the nitric acid to three drop doses, three times daily. Continued quin. as before.

Sixth day—Patient rallying; better in every way. Quin. reduced to three grain doses; other treatment as before.

This patient continued to improve rapidly, and was dismissed on the eleventh day, and is, at this writing, (April 5), almost as well as before the attack.

Remarks.—I visited this patient on the day that the benzoin was used, prepared to plug the nostrils posteriorly, a procedure which the parents had earnestly opposed. I was also provided with per sulph. of iron, but was induced first to try the benzoin, from reading an article or report of a case, by Prof. Barker, of New York, published in the American Medical Monthly, for February, 1858. I am glad to be able to add this case, as further proof of the efficiency of this remedy. When it will succeed, (and I am persuaded from the rapidity with which it produced coagulation, that it will scarcely ever fail), it is of course very much preferable to plugging.

As has already been intimated, I regard this case as being, at least so far as the condition of blood was concerned, very similar to, if not identical with, Diphtheritis. Hence the propriety of instituting the same internal treatment as proved eminently successful in that disease.

Reports of Lunatic Asylums of Ohio.

A great number of most interesting subjects at once suggest themselves, from a brief view of these public documents, many more than can be even enumerated in the space that can legitimately be devoted to this subject in our Journal. But the extent of prevalence, causes, curability, treatment, &c., stand out so boldly that they command a passing notice.

The glaring defects and gross blunders of our national census, as to the number of insane, have inspired only doubt and distrust in the minds of scientific staticians, and we are under the greater obligations to the labors of individuals, and a few State Governments, for some data that furnish us approximating guides as to the propor-

tion of this class to the entire population. While this varies in different countries, it has been with some accuracy determined for two of the New England States, and portions of others, to be about one in six or seven hundred. By increasing to 1,000 this ratio, the insane of Ohio to-day are not less than 2,500, and of this number only about one-fifth are provided for in the three State Asylums now in operation; and when the Hamilton County Institution shall have been completed, only about one-third will be brought within the range of *curative* establishments. The remainder are in the county infirmaries, farmed out by the township trustees, in the care of their friends, or wandering at large. If any one doubts the large estimate that we have made of this class, let him take the trouble to ascertain the actual number in two or three counties where his acquaintance is extensive, and his facilities abundant and reliable, and then compare the number thus certified with the number in the census list, and he will not only be surprised, but much less credulous of our statement. And this statement we believe to be nearly 1,000 less than the reality. That this prevalence is uniform, we by no means affirm, for this, as all other diseases, is variable, and may at one time abound very much more than at another. But this difference of prevalence comes under the head of causation.

Each of these reports furnish us some data upon the subject of causes of insanity, but each to a degree discredits its own records, as they are made up of the testimony of many incompetent witnesses, and are only put upon record in conformity to a law, that must necessarily be defective. In the report of Dr. R. Hills, of the Central Asylum, we have a most valuable resumé of twenty years' experience in the accumulation of facts as far as they can be determined, from which we may safely, though cautiously, draw some inferences. Of the 3,300 under treatment for these two decades, the causes assigned in 1,300 are direct physical agencies in the form of diseases and injuries; in 1,568, moral causes, or impressions made upon the brain, through the intellectual or the emotional channel; and 432, unknown. In the numbers received during the past year by the Southern Asylum, this inference, deduced from the records of twenty years is reversed, the physical causes taking precedence, and the proportion of unknown very large; while in that of the Northern Asylum the statistics of the year nearly conform with rule.

These figures, we think, are merely the representatives of the crude opinions of friends often incompetent to judge, and sometimes

anxious to conceal facts as to habits of patients and state of domestic relations. A more intimate acquaintance with individual cases often displaces them from their location in the table of causes. The action of long continued moral causes, generating extreme impressibility of brain and nervous system, prepares the way for the *determining* action of some physical cause, and on the other hand the exhausting, depressing effect of some habitual drain by hemorrhage or excessive secretion, or defective nutrition, is suddenly invaded by strong emotional excitement in the form of some great domestic affliction, pecuniary anxiety or religious solicitude, and suddenly insanity supervenes. From all which we may fairly infer the truth of the opinion now almost universally received by experts in the management of the insane, that madness is only one of the many bodily diseases that require a treatment suited to a given physical derangement. That in all cases it is a disturbed action, or obstructed movement of the machinery through which mental and emotional manifestations are made.

Curability.—The records of these three reports, especially the resumé of the Central Asylum, conform to the experience of the last 30 years in this country, England and a portion of France,—though the curability of insanity in the United States for a portion of that time has been above the average of British and French reports. And at present, it probably maintains that pre-eminence. Some of the best authorities believe it less curable now than it was forty or fifty years since, though improved modes of treatment have been devised in the meantime. This is based upon the opinion that it is more complicated with other affections of the head, and a less vigorous constitution.

But insanity follows the rule of all other acute diseases. When recent and uncomplicated, it is more amenable to curative means, than when, by long continuance, it has involved the brain or other organs in fixed morbid action, and possibly structural changes. Hence the division so often made of treatment and its results in *recent* and *old* cases; the former including those in whom the disease has lasted from a few months to one year; and the latter of all, of greater duration than one year. Of recent cases, the rate of cures ranges from 72 to 90 per cent. of those *discharged from treatment*; of the latter, (old cases,) about 25 to 30 per cent.; while most Institutions rating their cures on all cases discharged, make their per cent. about 45 to 60. Taking the insane as we find them, and making our com-

putations from the statistics of all subjected to treatment, until discharged as recovered, by death or otherwise, and we shall find that *about one-half are cured.*

Of the *treatment* of insanity, as presented by these documents, we are unable to say anything. The *results* are given, but the means by which they were obtained, are not even dimly shadowed forth. Of this, we think, the medical profession, to whose suggestions, petitionings, and early reports, these Institutions owe their birth, have some reasonable ground of complaint. We trust, however, that not many years hence, some one of the Superintendents of the many noble American Asylums, will gather together the rich accumulation of facts, experience and observation which they may furnish, and in a well digested work, reward the profession for all their interest in, and support of, these great charities. S. M. S.

OHIO STATE MEDICAL SOCIETY.

To the readers of the Ohio Medical and Surgical Journal:

As Chairman of the Ohio State Medical Society's Executive Committee, I wish to enlist your attention and co-operation in forwarding the ends for which it will meet in this city on Tuesday, the 7th of June next. To many of you I have forwarded copies of the proceedings of the meeting of last year. Such of you as do not receive such copy, are referred to the printed proceedings, as contained in the last July number of the Journal. From either of these sources you will be able to learn who constitute the several committees, work assigned, address of chairmen, &c. As it is supposed the several committees are engaged in the preparation of reports, it is hoped that aid will be given by physicians generally. Every effort will be made to render the approaching meeting both pleasant and profitable.

J. W. HAMILTON,
Chairman Ex. Com.

To Physicians and Surgeons:

As Chairman of the Ohio State Medical Society's Committee on Surgery, I wish at once to engage in the preparation of a report. I desire to obtain all the information I can in regard to the following

topics: the ecraseur, the silver suture, including vesico-vaginal fistula; ovariotomy since June, 1852; trephining skull, especially for the removal of depressions attending epilepsy; ligation of the carotids for epilepsy; exsections of the larger joints; prosecutions for mal-practice; serious or fatal effects of chloroform; disarticulation at the knee joint; disarticulation at or about the ankle joint, with any thing important or new in surgical pathology, surgical appliances or surgical practice.

I wish to be put in possession of the material for my report with as little delay as possible. By forwarding promptly, whatever you may be able to contribute, you will place me personally under very great obligation, and, I trust, render our profession a valuable service.

Respectfully,
J. W. HAMILTON, M.D.

Columbus, April 11, 1859.

From the New Orleans Medical and Surgical Journal.

Lying-in Hospital, Dublin.

October 11th, 1858.

Dr. Sanford Chailie:

Dear Doctor—I have been intending for some time past to send you some account of the practice, etc., of the Dublin Lying-in Hospital, but have been prevented by various circumstances from doing so before this. This hospital was founded more than a century ago, and is the largest of the kind in the United Kingdom. It contains one hundred and thirty beds, fifteen of which are reserved for chronic diseases of the uterus and its annexes. About two thousand women are confined here annually, making an average of five *per diem*.

The medical staff consists of a master, Dr. McClintock, and two assistants, all of whom reside in the hospital. The master is elected by the Board of Governors, and holds his office for seven years. The assistants each pay five hundred dollars *per annum* for the privil ges they enjoy. The *interne* pupils pay one hundred dollars for six months, or half that amount for three months, besides their board. The advantages here are very good, though not as much so as could be wished. Students are not permitted to perform operations, however qualified they may be, but can only look on while they are performed by the master or his assistants. At Vienna,

am told, students enjoy the privilege of applying the forceps, or making version when necessary.

The ventilation of this hospital is very good, and every attention is paid to cleanliness; but notwithstanding every precaution, there are occasional epidemics of puerperal fever. In each ward is a couch on which the patient is delivered, and two hours afterwards, she is removed to her bed. A purgative is usually given on the second day after delivery, and if the patient goes on well, she is allowed to sit up on the fifth day, and is discharged from the hospital on the eighth day. Prolapsus uteri appears to be very common among the lower classes of Dublin, which is doubtless owing, in many cases, to getting up too soon after confinement.

Dr. McClintock lays great stress upon the use of the binder after delivery, to keep the uterus firmly contracted, and to diminish the size of the abdomen. In the Paris hospitals, the binder is considered useless, and is not usually applied. The patients here are always delivered on the left side, not only in natural labors, but also in all operations. In Paris they are always delivered on the back. In natural cases I think the side position is preferable, but when an operation is to be performed, I think it is much more convenient to place the patient on her back, with the hips drawn over the edge of the bed.

In all obstetrical operations here, chloroform is usually given, unless there is some special contradiction. It is especially useful when it is necessary to make version, or to introduce the hand to bring away a retained placenta.

An interesting case occurred a few days since, showing the advantages of chloroform. It was a case of retained placenta caused by spasmodic contraction of the cervix uteri. After waiting four hours without result, Dr. McClintock decided to administer chloroform, and to introduce the hand; gradually dilate the os uteri and bring away the placenta. The patient was with considerable difficulty brought under the full influence of the chloroform, and on introducing the hand into the vagina, the os uteri was found to be dilated, and the placenta extruding, so that it was easily extracted, without introducing the hand into the uterus, which may justly be considered one of the most dangerous operations in obstetrics.

The only forceps used in this hospital are the straight forceps, but with longer blades than the ordinary short forceps. The following are considered indispensable conditions in order to render the for-

ceps applicable: 1st. "That the child be alive, or at least that there is no reasonable ground for supposing it to be dead. When the child is ascertained to be dead, the perforator and crotchet are used, being considered as less dangerous to the mother than the application of the forceps. The stethoscope renders most valuable aid in ascertaining the condition of the fœtus. If the fœtal heart is heard in the early stage of the labor, and afterwards the most careful examination fails to detect it, the death of the fœtus may be considered as almost certain, if not entirely so. Hence it is an established rule of the hospital to ascertain if the fœtal heart is audible, when the patient enters, so that if the labor becomes difficult, and instrumental aid is required, it can be ascertained with almost absolute certainty whether the child be alive or dead. 2d. "That the head has remained stationary within reach of the forceps, for six hours at least." This rule, of course, is not adhered to, when there exists any pressing complication, such as hæmorrhage or convulsions, etc. 3d. "That the membranes be ruptured and the os uteri fully dilated. 4th. "That the head of the child be so circumstanced that the ear can be distinctly felt, without the use of any force or violence on the part of the examiner.." Dr. Rigby, of London, does not approve of this plan of feeling for the ear. In his "System of Midwifery," he very justly remarks: "The blades should always, if possible, be applied one on each side of the head, the position of which must be determined by the direction of the fontanelles and sutures, *not by feeling for the ear*, as is usually recommended in this country. The ear can seldom be reached without causing a good deal of pain, even under the most favorable circumstances," &c., &c. 5th. "That the state of the soft parts be such as denotes the absence of inflammation; in other words, that they be free from undue heat, dryness, tumefaction, or morbid sensibility." These views are extracted from Hardy and McClintock's report of the hospital practice.

When the above conditions are absent and instrumental aid is necessary, craniotomy is performed with the perforator and crotchet. The cephalotribe is never used—it being considered a dangerous and unnecessary instrument. The ergot of rye is used with great caution during labor, as experience has shown that it exerts a very injurious influence on the fœtus, unless it be born soon after the ergot has been given. In cases of inertia uteri, when the head presents and the os uteri is fully dilated, and stimulating enemata of salt and

water have failed to excite efficient contractions, ergot, ʒss., is given, and the dose repeated in twenty minutes if necessary. But if the child is not born within *two hours* after the administration of the ergot, the forceps is applied and the child speedily extracted, as the experience of this hospital has been that the child was generally still-born, if not born within two hours after the ergot was given. Dr. McClintock is opposed to the administration of ergot during the third stage of labor, to produce the expulsion of the placenta. He says that if the placenta should happen to be morbidly adherent, the ergot might cause hour-glass contraction, render the operation of introducing the hand into the uterus to detach the placenta much more difficult, and, consequently, more dangerous to the patient. It is the common practice here to push out the placenta by grasping the fundus uteri and making considerable pressure, which is generally effective, if the placenta is detached.

We have recently had quite a number of cases of puerperal fever. The usual treatment consists in local depletion by means of leeches to the seat of tenderness; mercury and opium internally, and mercurial inunctions to the abdomen. I cannot say that this treatment has been more successful than many others that have been recommended for the cure of this terrible malady. The muriated tincture of iron has recently been very much in vogue in London, as a remedy in puerperal fever. It was tried in several cases here, with varied success. Two cases appeared to be much benefitted, while two others died. I have seen a sufficient number of cases to judge of its efficacy. It was not thought much of here, and was soon abandoned for the old treatment. One of the cases that appeared to be benefitted at first, died after a month's illness from exhaustion, produced by a phlegmonous inflammation of the calf of the leg. Twenty-four leeches were applied in the commencement of the attack, and then the muriated tincture of iron (ten drops every two hours) was given. The other case appeared to be convalescing, when she was attacked with arthritis in the wrist. She was removed from the hospital by her friends before convalescence, so that I am not able to say whether she recovered or not.

To give you an idea of the advantages a student has for seeing obstetrical operations, I will mention that during three months that I have been *interne* in this hospital, there have been eight forcep cases, three craniotomies, and two cases of version.

A very unnatural and interesting case of complicated labor oc-

curred a few weeks since, the details of which may interest you: B. B., æt. thirty-seven, primipara, was admitted into the hospital at noon on the 14th of September. She stated that at 9 A. M., on the 12th, she had been delivered of a dead child, at a village seven miles from Dublin. Her medical attendant discovered that there was another child in utero, and after waiting two days for its expulsion, advised her to come to the hospital. Accordingly, she was placed in a cab and brought in. On examination the os uteri was found to be half dilated, the membranes unbroken, the breech of a second child presenting, and the cord of the first hanging out of the vulva. In a short time the second child was born alive, and apparently of eight months' development. It was now discovered that there was a third child presenting also by the breech. There being some hæmorrhage, it was deemed expedient to bring down the feet and hasten delivery. The third child was also born alive. The uterus contracted, and the hæmorrhage ceased; but commenced again in about fifteen minutes, and the placentæ were still retained. There was no time to be lost; if the hæmorrhage was not speedily arrested, the patient would bleed to death. Although she was very much exhausted, it was deemed necessary to introduce the hand and bring away the placentæ without delay. This was accordingly done, giving her, at the same time, stimulants. There were two placentæ, both of which were partially morbidly adherent. The uterus now contracted firmly, and all hæmorrhage ceased; but in spite of all efforts to sustain her vital powers, she sank rapidly, and expired in a few hours after delivery, from the combined effects of exhaustion, arising from the protracted labor, the shock of delivery, and hæmorrhage. The pulse continued perceptible to the moment of dissolution. The great error committed by the "village doctor" in this case, was in not rupturing the membranes of the second fœtus, soon after the birth of the first, and before the os uteri had time to contract. Had this been done, the patient would have stood a much better chance of recovery, although the adherent placentæ and hæmorrhage would have rendered the prognosis very unfavorable.

The most remarkable feature of the case, however, was revealed at the autopsy: The uterus was very large, and on its anterior surface was an *enormous fibrous tumor*, seven or eight inches long and four or five wide, The woman stated on coming in, that she had perceived a tumor in the abdomen for about two years. This shows conclusively that organic disease of the uterus does not prevent con-

ception; and it is not a little remarkable, that utero-gestation should have gone on almost to the full term with triplets, while at the same time, there existed such a large amount of organic disease in the body of the uterus.

The children were in a healthy condition when taken from the hospital. Yours, very truly,

W. A. McPheeters, M.D.

African Edibles.—In Barth's very instructive, if not entertaining, "*Travels and Discoveries in North and Central Africa,*" we meet with frequent notices of the articles of food, chiefly from the vegetable kingdom, used by the inhabitants of those extensive regions. The subject is interesting, both in a hygienic and economic point of view; and as such we are now bringing it before our readers, without any regard to methodical arrangement, but rather as we find it in the volumes before us. Barth's starting point was Tripoli. He made an excursion, however, previously, in an eastern direction, through the Regency.

Soon after setting out, the travelers emerged from the palm-groves which constitute the charm of Tripoli. Then they came to the fine date-plantations of Zenzer, celebrated in the fourteenth century as one of the fairest districts of Barbary, and they pass by a great magazine of grain. Fine olive trees pleasingly alternate with the palm-grove, while the borders of the broad sandy paths were neatly fenced with the *cactus opuntia*, or prickly pear. As preparation for their nomadic life in crossing the desert, they laid in a supply of corn and dates. The fruit called gatuf of the batim tree, (*Pistacia Atlantica,*) or Barbary Mastich, is used by the Arabs for a variety of purposes. In other countries its fragrant and astringent resin is best known. The rearing of fruit trees seems to be a favorite occupation of the Berber race, even in the more favored spots of the Great Desert. The cultivation of the olive extends to the borders of the Desert. Saffron and olives are the two staple articles of industry in this region, the maritime one of Tripoli. The cultivation of grain is made productive by means of irrigation.

On the second departure of the travelers from Tripoli, their course was nearly due south, to Murzuk, on the border of the Desert. On the oases of Mizda, and some others still further south, barley and wheat in cultivation were found in the vicinity of olive

and fig trees. The soil around Murzuk, a little to the south of 21 deg. N. latitude, is very arid; even in the plantations which surround it there are only a few favored spots, where, under the protection of a deeper shade of the date trees, a few fruit trees can be cultivated, such as pomegranates, figs, and peaches. With great labor, wheat, barley, gedheb, (or rather kédheb,) are cultivated. Culinary vegetables, including onions, are extremely scarce; milk, except a little from the goats, is quite out of the question.

In the oases of Ghat and Barakat, Guinea corn, gero or millet, (*Pennisetum typhordeum,*) is cultivated to a much greater extent than wheat or barley. Palm-groves are repeatedly passed, and irrigation witnessed in the fields and gardens. In the valley Nghakelil richly overgrown with luxurant herbage and adorned with fine tallha trees, was exhibited the first specimen of the *Balanites Œgyptiaca,* (hajilig, of the Arabs,) of which we shall soon speak. In this region, at the bottom of a valley skirting mountain passes, was seen the grass *Avena Forskalii,* which is very much liked by the camels. Here, also, the travelers partook of the flesh of the Wadân, (*Ovis trugdaphos,*) an animal very common in the mountainous districts of the Desert, and found often in company with the wild ox.

Though not ranking with edibles, we may mention, by the way, that in latitude 20 deg. N., the senna plant (*Cassia senna*) appeared in tolerable quantity. More germain to our actual theme is the appearance, in this district, the valley of Gebi, of the absiga, (*Capparis Sodata,*) a variety of the caper, called siwak, or lirak, by the Arabs. This, writes Barth, "is an important bush, the fruit of which is not only eaten fresh, but also dried and laid up in store; while the root affords that excellent remedy for the teeth which the Mohammedans, in imitation of their prophet, used to a great extent. The root, however, at least on the shores of the Tsad, by the process of burning, affords a substitute for salt. It is the most characteristic bush or tree of the whole region or transition between the desert and the fertile regions of Central Africa, between the twentieth and the fifteenth degrees of northern latitude." In the course of his travels, Barth saw it nowhere of such size as on the northern bank of the Isa or Niger, between Timbuktu and Ghago; the whole ground which this once splendid and rich capital of the Singhay Empire occupied being at present covered and marked out by this celebrated bush. The berries, although ripening, (August 22d,) afforded a slight but refreshing addition to the food of the travelers.

Skirting the mountain group of Tintellust, elevated 5,000 feet above the ocean, Barth and his companions passed through the valley of Selufiet, in lat. 19 deg. N., rich in trees and bushes, but without herbage. Here he met with his old acquaintances from the Said and Nubia, the dum-tree or dum-palm, (*Cucifera Nigritia.*) This tree has a wide geographical range through Central Africa; but its chief region is that of Bornu proper. Its fruit is an essential condiment to the soup made of Negro millet or Guinea corn. At Tintellust, in the mountainous country of Air or Asben, which Barth calls the Switzerland of the Desert, he and his friends received a small supply of millet, butter, and a little fresh cheese, and they purchased two or three goats and a camel-load of durra, (*holcus sorghum,*) of the dietictic value of which last grain we shall speak hereafter.

Leaving his companions at Tintellust, Barth made a journey to Agades, in a southwesterly direction. On the way, in the village of Eghellal, at the foot of a mountain of the same name, his eyes were greeted with the sight of well-fed cattle returning from their pasture grounds. "They were fine sturdy bullocks of moderate size, all with the hump, and of a glossy dark-brown color." It conflicts much with our ideas of the great Desert of Sahara, to be told, as we are by our traveler, that in the valley of Aideras, in Air, he saw not only millet, but even wheat, the vine, and dates, and almost every species of vegetable. A little farther south, in the valley Budde, where the mimosas attained a large growth, Barth first became acquainted with the karengia or *Pennisetum distichum*, on the seed of which many of the Tawarek from Bornu, as far as Timbuktu, subsist more or less. The drink made from it is certainly not bad, resembling in coolness the fura or ghussub-water. The grass itself is a most nourishing food for cattle. The little burr-like seeds, are, however, a great annoyance to the traveler in Central Africa, by attaching themselves to every part of the dress. Hence the necessity—not neglected even by the natives—to be always provided with small pincers, in order to draw out from the fingers the little strings which, if left in the skin, will cause sores.

As the market of a place affords a pretty good indication of the dietetic usages of the people, we may begin references of this nature by speaking of that of Agades. Negro millet is the real standard of the market, and in it the merchants of the town chiefly trade. The

display of vegetables was poor; only cucumbers and molukhia (*corchorius olitorious*) being procurable in considerable plenty. The butchers' market was well furnished. Barth was gratified by a present, from a blacksmith friend of the place, with a large batta or leather box, holding butter and vegetables, (chiefly melons and cucumbers,) and the promise of another sheep. In the more favored valleys of Air or Asben, there are considerable herds of cattle. A long desert plateau intervenes between Asben and the Tigama country, a region the border one of the desest, and rich in cattle. Their slaves are busy in collecting and pounding the seeds of the karengia or azak, *Pennisetum distichum,* which constitutes a great part of their food. The desert region just mentioned is the home of the giraffe, wild ox, ostrich, etc. In this part of the journey the travelers made the acquaintance of another tree, a native of Middle Sudan, named magaria by the Arabs, and kusubu by the Kanuri. It produces a fruit of a light-brown color, nearly equal in size to a small cherry, but in other respects more nearly resembling the fruit of the cornel, (*Cornus.*) When dried, it is pounded and formed into little cakes, which are sold all over Hausa as *tuwo-n-magaria.* It may be safely eaten by a European to allay his hunger for a while, till he can obtain something more substantial. The next district to the south, traversed by the line of the fifteenth degree of north latitude, is Damerghu, an undulating rich country, the granary of, and tributary to Asben. The production of grain consists in millet of the white species; durra or sorghum is not seen. Here the travelers met once again with the first poor specimens of the magnificent tamarind tree, the great ornament of Negroland.

The desert being passed, and the travelers fairly in Bornu, and of course in Central Africa, the dietary of the people, resulting from a richer soil, extensive pastoral regions, and rivers, became more abundant and varied. The change was more marked at Tasawa, where Dr. Barth made some stay. Before reaching this place, and near a village called Baibay, the caravan was surrounded by a great many women who offered for sale "godjia" or ground-nuts, and "dukkwa" or a sort of dry paste made of pounded Guinea corn, (*Pennisetum,*) with dates and an enormous quantity of pepper. This is the meaning of dukkwa in these districts; it is, however, elsewhere used as a general term, signifying only paste, and it is often employed to denote a very palatable sort of sweetmeat made of pounded rice, butter, and honey. Leaving our readers to the

indulgence of the sweet memory of such a compound, we shall not task their attention further at this time; but shall avail ourselves of a future opportunity to make them acquainted with the edibles and condiments of Negroland proper.—*North Am. Med-Chir. Rev.*

The Late Professor William Tully.—Last month we briefly announced the death of this distinguished author; the intelligence was received at the moment of going to press. Warmly interested in the success of our Journal, although feeble in health, Dr. Tully hoped to be able to give a monthly contribution to its pages, but his health and professional calls did not permit it. After concluding his lectures at the Berkshire Medical College, last fall, upon his return home he commenced an essay upon Veratrum Viride; he was one of the first to investigate its properties, and his manuscripts upon this article, which are quite voluminous, probably furnish the most authentic and reliable history of its advancement as a medicinal agent. And while to us it is a matter of deep regret he could not have been spared to complete it himself, it is of small importance compared with the loss to the profession of his master mind in the completion of his work upon Materia Medica.

The following extracts from a letter from the friend and attending physician of Dr. Tully—Dr. Church, contains intelligence which will interest many of our readers. They were politely forwarded by the gentleman to whom they were addressed.

"For a large part of his life Dr. Tully had been subject to attacks of diarrhea, and also of irritability of the bladder; sometimes one and sometimes the other, and sometimes both at the same time. At the time of the last attack he had been free from either longer than usual, and was in his usual health and strength. The day after his return from Hinsdale and Middlefield, to which places he had been called professionally the affection of the bladder came on, and increased rapidly till it was evident that it was to prove more severe than any he had had previously. On the third day the urine became bloody, and for two or three days the evacuation appeared to be more than half blood. He had febrile irritation; became delirious, and his strength failed rapidly, till about the sixth day when he became comatose, and died on the 9th—February 28th. For the first four or five days he suffered greatly; when the bladder contained only two or three ounces, his pain was excruciating; the diarrhea

was very slight. It was remarkable that while in some of his previous attacks of diarrhea I have known him to take six grains of opium every hour for twenty-four, without any disagreeable effects; indeed he was able to watch the clock and take every dose himself, in his last sickness only one grain an hour obviously increased the coma."

"He has left two daughters—unmarried; though not destitute, they will need all the property there will be left after the settlement of the estate. His books which could not have cost less than fifteen thousand dollars originally, ought now to sell for ten thousand. Mr. E. C. Herrick has just sent a catalogue of about three quarters of them, which he made himself ten or twelve years ago. It covers thirty-six pages; it contains many valuable works. If you can offer any suggestions as to the best way of disposing of them, or any portion of them, we would be very thankful to you. Are there none of the medical schools in our country to purchase any of them to add to their libraries? I know not what may be done with his manuscripts; a good compiler could make something valuable from them, and I cannot but hope that the prejudice heretofore existing against the author and his views will abate, and that eventually, due credit will be awarded to him. Few men in America have labored more assiduously through a long life for the advancement of medicine, and perhaps none with more independence of thought and judgment; and that his labors have been successful, in the highest sense of the word, is evinced by the fact, that very many of the principles taught by him twenty-five or thirty years ago, are now being adopted very extensively and by many physicians, doubtless, who know not from whom they originated. Dr. Tully was eminently a practical man, general opinion to the contrary notwithstanding.

Dr. Tully's Library.—On a recent visit to Springfield we had the curiosity to look at Dr. Tully's library; which, as we were told, is to be offered for sale in a few months. Though all the books we examined gave ample proofs of the attention that had been bestowed upon them by their owner—the slight soiling of their paper covers, the numerous small slips of paper inserted to facilitate as references, &c.—they were in a remarkably good state of preservation; some will be found that were ancient and worn when they come into his possession, but most of them, doubtless, will appear like new books on the removal of the paper covers. A considerable number, and some of the most costly ones, as we were informed, were presented

to him by his friends, who acted wisely, doubtless, in the bestowment of their gifts; and yet a moderate fortune must have been expended in purchases made by himself. We could not but admire their neat and convenient cases also, of which there were eight or ten, each extending from floor to ceiling, but divided into four separate parts, with folding doors secured by locks and keys, with handles upon each end for the convenience of moving them. We should judge that six men without extraordinary effort, could remove the whole of these cases from the house in the space of thirty minutes, and without displacing a single volume. There were many, however, for which there was not room in the cases. When in New Haven his library was insured for nine thousand dollars; it contains rare and valuable works which were never for sale in American book-stores.

To facilitate our object we were politely shown a catalogue in manuscript, prepared some ten or twelve years ago, covering thirty-six pages of foolscap. Only about three-fourths of his books at that time were included in it however, and many have been added since; and besides there are many works of from two to six or eight volumes, and several of a considerably larger number. The first class we noticed on the catalogue was the Dictionaries, of which there were from seventy-five to eighty volumes; some of them must have been very expensive. Medical books, of course, constitute the largest class; but there are between two hundred and fifty and three hundred upon botany; a large number upon chemistry; upon zoology, entomology, mineralogy, &c., and a considerable number upon the natural history of man. With a quick and clear perception of the beauties of nature, and the importance of a knowledge of her laws, early in life Dr. Tully became a successful cultivator of the natural sciences, and spared no pains or expense in procuring books, particularly upon botany and chemistry. Up to within a short time of his death he was familiar with most if not all there was known of these sciences; indeed the world is indebted to him for important discoveries and improvements in both of these sciences. We were shown several large quarto volumes of botanical engravings, some of them as large as life and beautifully colored, giving the most exact and life like representations of all parts of the plants —these must have been very expensive. There is also a large collection of miscellaneous works, encyclopœdias, books of travel, biography, history, geography, several fine atlases, complete sets of

medical and scientific journals, and of Bulwer's and Sir Walter Scott's novels; and pamphlets without number, some of which must still be valuable. We were told also that he had been a diligent collector of portraits, of which he has many hundreds of distinguished men.

This collection of books, the original cost of which could not have been less than twenty thousand dollars, will be sold, probably, for much less than its present real value; it is a pity that they cannot be kept together. The catalogue will probably be revised and published, and due notice will be given of the time and place of sale. It is hoped that some of his manuscripts upon medicine, of which he has left a large amount, will yet be published.

Dr. Tully was one of the remarkable men of the age—one of the world's workers, whose labors are seldom appreciated while they live; that he has done more to modify and improve the practice of medicine in this country than any other American physician, is the opinion of those who sat under his teachings twenty-five or thirty years ago; and it will be acknowledged, probably, in time, that he has done more to reduce medicine to a science than any American author. The most important achievments in medicine, as in everything else, are seldom made amid shouts of applause, but by those unobtrusive men who have thought closely and studied long; who have wasted life and fortune in the pursuit of knowledge. If science is of any use in medicine, and is to be encouraged, then surely Dr. Tully's memory should be cherished by the physicians of his native country; and it is hoped that some one who is competent will ere long do justice to it."

In conclusion we give an extract from a review of Dr. Tully's Materia Medica in October last, which is a very just tribute to his character as a scholar and writer.

"We believe that this is the most important work on the subject of which it treats which has appeared in this country, or which has been published in our language in the present century. Dr. Tully is one of the solid men of the profession. Of mature experience, a profound botanist, an excellent theoretical chemist, a thorough medical scholar, a close and discriminating observer; he is the very man for the task he has undertaken. The Materia Medica has long needed the influence of some master mind, one who could infuse into it a new life, and set the medical world a thinking. We have gone on imitating and compiling, saying what others have said, and

treading in the old beaten path a little longer than is profitable. The time has come for an original treatise, by a man thoroughly competent, who has the confidence of the profession. We now have such a work, or at least the beginning of one.

Dr. Tully has very little regard for ancient dogmas or venerated names; no man's opinions are less influenced by mere authority; sometimes, indeed, he seems to lean to radicalism; he lays violent hands upon errors hoary with age, and respectable from lineage and association. In doing this he has not, perhaps, a sufficient regard for the shock he is giving to the established faith, and the chaotic state which always succeeds sudden revolution. We cannot, however, but admire his boldness and vigor, while we wish success to his efforts at re-construction. While his opinions are, in a sense, revolutionary, he has none of the shallowness, the recklessness and the quackery which usually characterize the common brood of reformers. He lacks the necessary elements of the fanatic. In truth, he has not warmth of imagination enough to make him even an enthusiast. On the contrary, he is cold, intellectual, sceptical. He insists on a reason for everything, and fears not to attack the most cherished prejudices. Dr. Tully's habitual distrust of authority led him to investigate errors, and to track them to their fountains. Whatever may be thought of his success in adding to the truths of medical science, or constructing a system of his own, it cannot be denied that he has removed a vast amount of rubbish, thus facilitating the progress of those that follow."—*New York Jour. of Materia Medica.*

Diphtheria.—At a recent meeting of the Medical Society of London, a very interesting paper on diphtheria was read by Dr. W. R. Rogers, who gave a concise history of the nature and pathology of the disease, illustrated by several cases which had fallen under his own notice. The work of Bretonneau was the foundation of our modern views on diphtheria; and the descriptions of that accurate observer were found to be verified by the cases which had lately occurred in this country. Dr. Rogers thought that diphtheria was a totally distinct disease from scarlatina, with which, indeed, it had but few features in common; although the fact that the throat was affected in both often led to errors in diagnosis. Dr. Rogers did not believe that the existence of the *oidium albicans* was an essential

feature of diphtheria, but was to be regarded as an accidental complication. The best treatment of diphtheria consisted in the application of local remedies, such as hydrochloric acid, with an equal quantity of glycerine, and the administration of nutritious food and stimulating beverages—the quantity of beer and wine which patients could bear being often quite astonishing. Dr. Harley, in the course of the discussion which followed the reading of the paper, offered some highly important observations on the nature of diphtheritic pseudo-membranes, and the mode of their formation, From a careful examination of these structures he had come to the conclusion that they were not to be regarded as fibrinous membranes, but rather as layers of coagulated mucus mixed with epithelial scales, and gradually concreting and solidifying into tubes and casts. He thought with Dr. Rogers, that the presence of the *oidium albicans* was not essential to the disease, and in many well-marked cases which he had carefully examined with the microscope, he could find no trace of the parasitic fungus; but in one case, where he had not found the fungus at first, he found it some hours afterwards, so that he considered the latter found a nidus in the diphtheritic exudation in certain cases. The very insidious nature of the disease was alluded to by most of the speakers; and from the absence of any well-marked symptoms at the commencement, treatment was too often neglected until after the period when it could be useful. Diphtheria should be regarded as a blood-disease of a peculiar nature, attended invariably by the production of a pseudo-membrane on some region of the body, and the early treatment consisted in cauterizing the part where it first developed itself, and at the same time supporting the strength of the patient. Tracheotomy, which is the only resource—and that a hazardous one, in the cases where the trachea is lined with a false membrane—was very little discussed at the meeting from want of time.—*Med. Times and Gaz.*, Feb. 5, 1859.

Caucasian Insect-Powder.—The so-called Persian, but properly termed Caucasian insect-powder, has long been known to the Trans-Caucasian populations, under the name of "Guirila." In that paradise of vermin, it is an article of a very considerable commerce, and it is not only carried inland through Russia in large quantities, but is also exported to Germany and France. A large depot exists

at Vienna. It is a coarsely-ground powder of a green color, and penetrating odor, formed of the flowers of the *pyrethrum carneum*, and *roseum*, which grow in the Trans-Caucasus at a height of 5,000 or 6,000 feet. This powder possesses the peculiarity of rapidly stupefying the insects, which soon afterwards die. Strewed about the room or bed, it proves a poison to fleas, lice, flies, etc. In the military hospitals in hot countries it is an invaluable preventive of the formation of maggots in wounds, and the more so inasmuch as its use is attended with no disadvantage, unless employed in large quantities in closed bedrooms, when it may give rise to confusion in the head, such as is produced by flowers or new hay. It has been long used as a means of preserving insects; and can not be too strongly recommended to those who have the care of herbarian and other natural history collections, liable to the depredations of insects. Unfortunately the demand for the powder has been so great of late as to lead to its adulteration by the addition of the stalks and leaves of the plants to the flowers, and to the mixing of the new with stale powder. As a general thing, the powder purchasable in Germany is very different from the Asiatic in color, smell, and efficiency.—*Medical Times and Gazette*, March 5, 1859, from *Buchner's Report.*

Artificial Anus—How long can an individual live with an inguinal anus, made soon after birth, in consequence of a total absence of the anus orifice? This question was lately answered by M. Rochard, chief surgeon of the Seamen's Hospital of Brest. This gentleman sent a paper to the Academy of Medicine of Paris, founded upon five cases, the subjects of which were operated upon soon after birth, and an artificial anus made in the left groin. The patients have all lived to a more or less advanced age, one of the operations having been performed by Duret so long ago as 1793. Two questions arose after the favorable report of the paper made by M. Robert: 1st. Shall the surgeon, in cases of imperforate anus, search for the lower end of the rectum within the pelvis, if, previously to incising the perineum, he cannot feel the rectal pouch? 2d. Shall the artificial anus be made in the groin or the loins? Many children have died from the handling of the pelvis and the search after the lower end of the

rectum, which sometimes is not found at all. From the discussion and the merits of the question, it would appear that it is safer to open the groin than cut through the perineum, if the pouch is not felt. As to the second question, it is obvious that the fear of wounding the peritoneum, and of giving rise to hernia, should not make us give up the inguinal anus, as this said infirmity is better concealed and managed by the patient in the groin than in the loins.—*Med. News.*

Surgeons in the British Navy.—The following extract from a recent speech in the House of Commons of the first Lord of the Admiralty, Sir John Parkington, gives encouraging assurances that the position of these officers will be improved, and that the same comparative rank and emoluments will be allowed them as has been given by a recent warrant to their brethren in the army :—

" In answer to a question put to me yesterday, I stated that I should avail myself of this occasion to allude to a subject which has lately excited very great interest—viz., the present position of the surgeons of the Royal navy. (Hear, hear.) I am sorry to find that my answer has been very much misunderstood. I by no means intended to imply that I had any doubt or hesitation as to the course to be adopted. On the contrary, I then meant, as I mean now, to express in distinct terms my opinion that the present position of the surgeons in the navy is not satisfactory. (Hear, hear.) But I go still further. The complaints we now hear from these officers are, no doubt, much founded upon the late warrant issued in respect to the army ; but I think that even before the date of that warrant the surgeons of the navy were not relatively placed on an equality with their brethren of the army. Now, however, they have an unanswerable claim to the consideration of their country. Nothing in the military service could be nobler or more gallant than the manner in which the medical officers of the navy have discharged their duties under the most trying and painful circumstances, and they are, therefore, entitled to more liberal treatment than they now receive. Their claim is based upon two grounds—first, it is due to them as gentlemen that their position should be improved ; and, secondly, public policy requires that the services of this most useful branch of the profession should be more highly appreciated and better requitted, so that able and efficicient men may not be deterred from join-

ing the navy. It is, therefore, our intention in spirit and in substance to concede to naval surgeons the advantages which they justly seek to obtain. At the same time I will not and cannot now commit myself to the exact mode in which that object shall be carried out. The peculiarities of the naval service may render it inconvenient to follow the precise rule pursued in regard to the army; but these and other points of detail will be duly considered before our plan is finally decided upon."—*Med. Times and Gaz.*, March 5, 1859.

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But in consequence of the exclusion of these deleterious principles from the Elixir of Opium, it is not liable to derange the functions of the system, nor injure the constitution and general health—hence its high superiority in all cases in which the long-continued and liberal use of opiates is indicated and necessary to allay pain and spasmodic action, and induce sleep and composure, as in cases of fractures, burns or scalds, cancerous ulcers, and other painful affections.

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